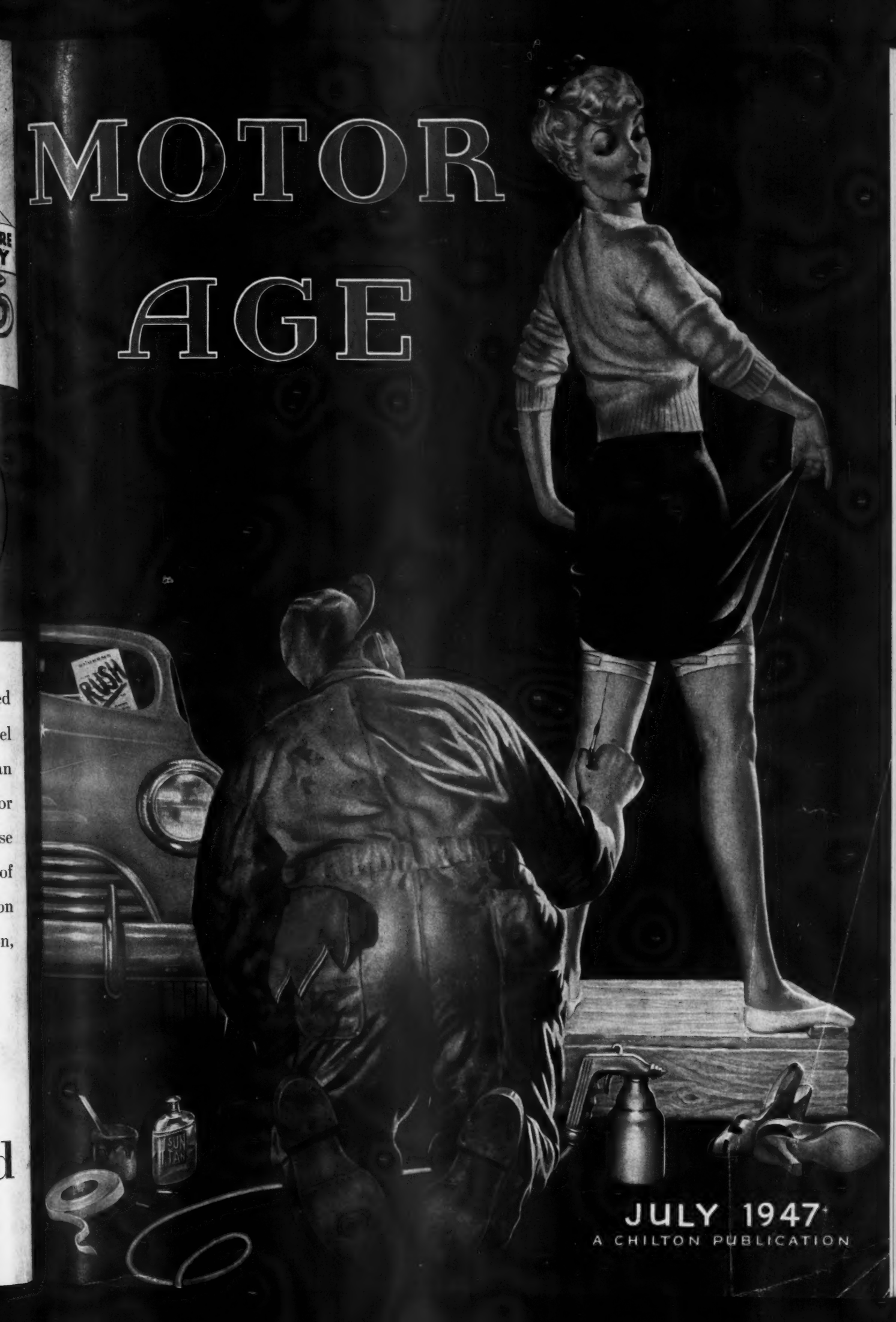
MOTOR AGE



JULY 1947

A CHILTON PUBLICATION

Generous Wall Lubrication Always Under Control

That's why Steel-Vents work...
and give two to three times the efficient life
of conventional rings IN REBORES

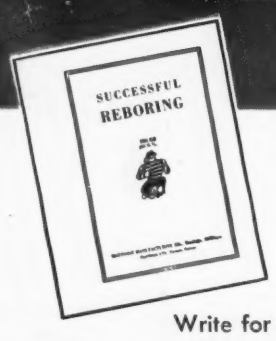
Normally, when engines are ready for a rebore, the water jackets are coated with lime and scale. This insulation retards heat flow to the cooling water . . . cylinder bores are hotter and more distorted than in a new engine. To offset such conditions, more cylinder wall lubrication is an absolute necessity.

Because of their phenomenal oil carrying ability, Steel-Vents easily provide this added lubrication. They deliver a generous amount of oil to the walls—*all the way up*. That's one of the reasons why they give two to three times the efficient life of conventional rings. Then too, Steel-Vents never clog up. They keep on functioning at top efficiency, long after conventional rings are clogged or worn out.

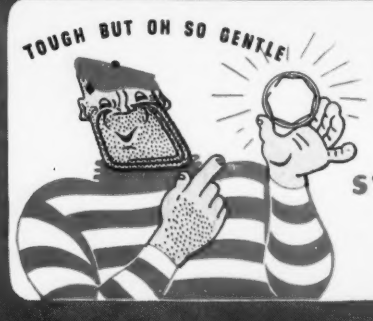
Steel-Vent's exceptionally long life has been proven by service in thousands and thousands of rebored engines. Think this over before you put conventional rings in that next rebore job.

HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN

Hastings Ltd., Toronto



Write for your copy
of "Successful Reboring"

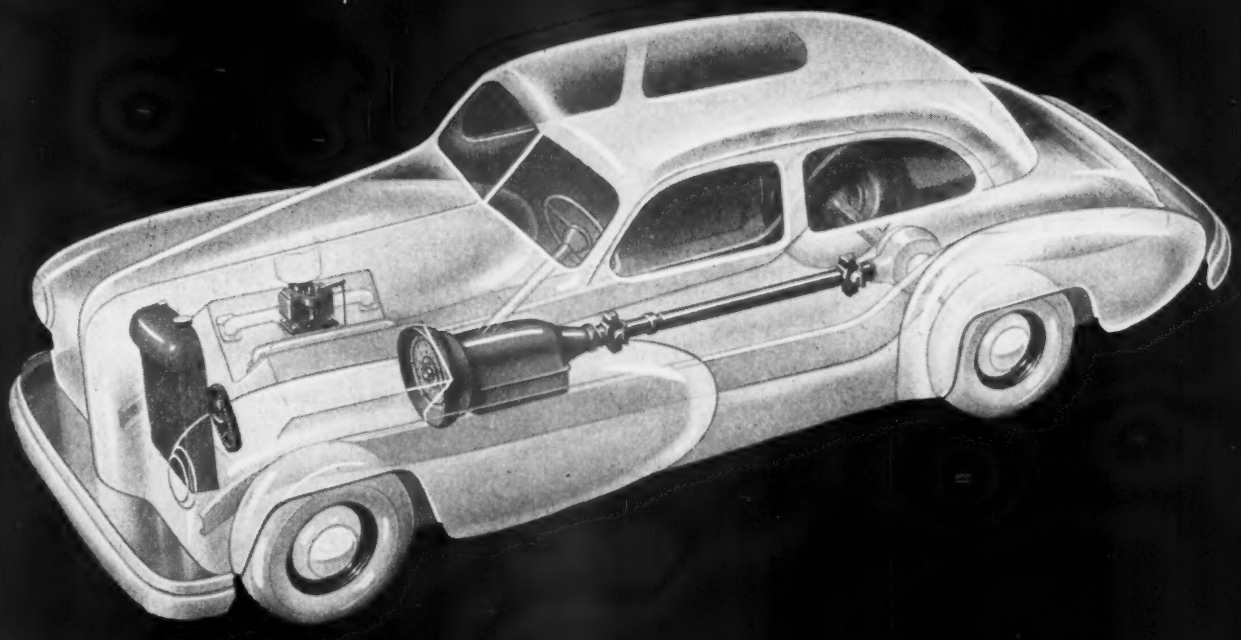


HASTINGS

STEEL-VENT PISTON RING

Generous Wall Lubrication
Always Under Control

19 of the 20 makes of motor cars embody essential parts made by BORG-WARNER!



TRANSMISSIONS
TIMING CHAINS
OVERDRIVES
SYNCHRONIZERS
CLUTCHES

UNIVERSAL JOINTS
DRIVE SHAFTS
CARBURETORS
RADIATORS
TAPERED WHEEL DISCS

ENGINEERING
B-W
PRODUCTION

Executive Offices, Chicago. These units form Borg-Warner: BORG & BECK • BORG-WARNER INTERNATIONAL BORG WARNER SERVICE PARTS • CALUMET STEEL • DETROIT GEAR • DETROIT VAPOR STOVE • INGERSOLL STEEL LONG MANUFACTURING • LONG MANUFACTURING CO., LTD. • MARBON • MARVEL-SCHEBLER CARBURETER • MECHANICS UNIVERSAL JOINT • MORSE CHAIN • MORSE CHAIN CO., LTD. • NORGE • NORGE-HEAT • NORGE MACHINE PRODUCTS PESCO PRODUCTS • ROCKFORD CLUTCH • SPRING DIVISION • SUPERIOR SHEET STEEL DIVISION • WARNER AUTOMOTIVE PARTS • WARNER GEAR • WARNER GEAR CO., LTD. • WISCONSIN TRANSMISSION

Adds wings to dollars flying to TEXACO DEALERS!



TEXACO Sky Chief keeps customers coming back for more. This high-performance gasoline is building high-dollar volume for Texaco Dealers everywhere.

And . . . backing up Texaco Dealers all over the U.S. is advertising like the above. This current magazine advertisement alone will reach more than 40 million people!

Week after week you see Texaco advertising in magazines, in farm journals, on thousands of billboards, on the popular Texaco Star Theater radio program. In addition, Texaco Dealers are provided with window displays, direct mail, book matches, and many other, on-the-spot, selling helps.

It's no wonder that Texaco Dealers are such busy dealers! THE TEXAS COMPANY



A Great Line-up for **TEXACO DEALERS**

Sky Chief and ***FIRE-CHIEF*** GASOLINES
HAVOLINE *and* TEXACO MOTOR OILS • MARFAK
CHASSIS LUBRICATION • REGISTERED REST ROOMS

TUNE IN . . . Texaco Star Theater presents the Tony Martin show every Sunday night. See newspaper for time and station



Before and after — MECHANICAL TUNE-UP

BEFORE YOU TUNE-UP!

Add one quart of Permatex Toon-Oyl to the crankcase oil...and let the car idle. Sludge and carbon-gum binders will dissolve quickly. Valves, piston rings, oil lines and oil screens will operate freely. Then you'll have a clean engine . . . ready for all your mechanical adjustments.

AFTER YOU TUNE-UP!

The best procedure is to drain out the old crankcase oil (with its dissolved sludge and gum) and replace with fresh oil containing one quart of Permatex Toon-Oyl. Then the car owner will get easier starting, snappier pick-up, more power and smoother driving.

Tune-up Chemically!

℞

ADD 1 QUART OF PERMATEX TOON-OYL TO 5 OR 6 QUARTS OF ANY TYPE OF MOTOR OIL IN THE CRANKCASE

PERMATEX COMPANY, INC., BROOKLYN 29, N. Y.

BACK AGAIN



AND STILL THE BEST!

PACKARD FOUR-FORTY IGNITION CABLE

- **IMPROVED IN QUALITY—greater resistance to heat, cold, oil, moisture, corona, age and abrasion.**
- **IMPROVED IN BALANCED CHARACTERISTICS—better all-round performance and efficiency.**
- **IMPROVED IN APPEARANCE—smoother, better-looking.**

War-born shortages and material scarcities held it back for many months. But, at last, the *new* Packard Four-Forty ignition cable is available everywhere . . . and it's better in every way!

New postwar methods and materials put Packard Four-Forty farther than ever ahead of the field. Use this finer cable for better performance, longer life, more satisfied customers!

YOU'RE RIGHT WITH Packard

REG. U.S. PAT. OFF. TRADE MARK



PACKARD ELECTRIC DIVISION
GENERAL MOTORS CORPORATION
WARREN, OHIO

FOREMOST BUILDER OF AUTOMOTIVE AND AVIATION WIRING



You can rest easier 'cause of Du Pont's uniform price policy

YES, sit back and reee-lax! No other dealer anywhere in the country is getting a better break than you on "Zerone" and "Zerex." Du Pont has consistently recognized its obligation to provide quality products at *stable low prices* to the dealer and to his customers—the buying public.



$1.00 A GALLON. The dollar brand in most demand. Maximum protection for minimum cost.



$2.65 A GALLON. Won't boil out—one filling lasts all winter in a properly operating cooling system.

Read what four other smart ducks say:



GOOD PROFITS are what dealers care most about (who doesn't?). "Zerone" and "Zerex" are popularly priced for volume sales, with discounts that allow dealers an ample margin of profit.



MADE BY DU PONT. There's magic (and profits, too!) in the Du Pont name. The Du Pont trademark on every can of "Zerone" and "Zerex" means quick public acceptance—and gives dealers an already-sold market for their stocks.

TECHNICALLY OUTSTANDING. Special *chemical* inhibitors in "Zerone" and "Zerex" make them highly rust-retardant and anti-acid. These famous Du Pont anti-freezes help keep radiators and cooling systems in good operating condition.



CONSISTENTLY ADVERTISED. This season, as in every past year, "Zerone" and "Zerex" will be backed by a nation-wide advertising campaign using magazines, newspapers, billboards, point-of-sale material and announcements on the Du Pont "*Cavalcade of America*."



DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

"ZERONE" AND "ZEREX"
REG. U. S. PAT. OFF. REG. U. S. PAT. OFF.
ANTI-FREEZE

MOTOR AGE, Vol. LXVI, No. 8. Published monthly by Chilton Co., Chestnut & 56th Sts., Phila. 39, Pa. Entered as Second-Class Matter December 27, 1935, at the Post Office at Philadelphia, Pa.; Under the Act of Congress of March 3, 1879. In case of Non-Delivery Return Postage Guaranteed. Subscription price: United States, Mexico, United States Possessions, and all Latin-American countries, $2.00 per year. Canadian and foreign, $3.00 per year; single copies, 25 cents.

SELL AN AIRTEX GASOLINE FILTER-DAMPER with EVERY CARBURETOR or FUEL PUMP JOB!



MOTORIST: I think it's my carburetor.

YOU: Yes. The needle valve is leaking. A low cost AIRTEX Gasoline Filter with Pulsation DAMPER would have prevented this trouble and expense.



MOTORIST: Why? What does the DAMPER do?

YOU: The AIRTEX Pulsation DAMPER suppresses pressure pulsations in the flow of gasoline from fuel pump to carburetor and delivers a smooth, even-flowing supply of FILTERED GASOLINE.



MOTORIST: What difference does that make?

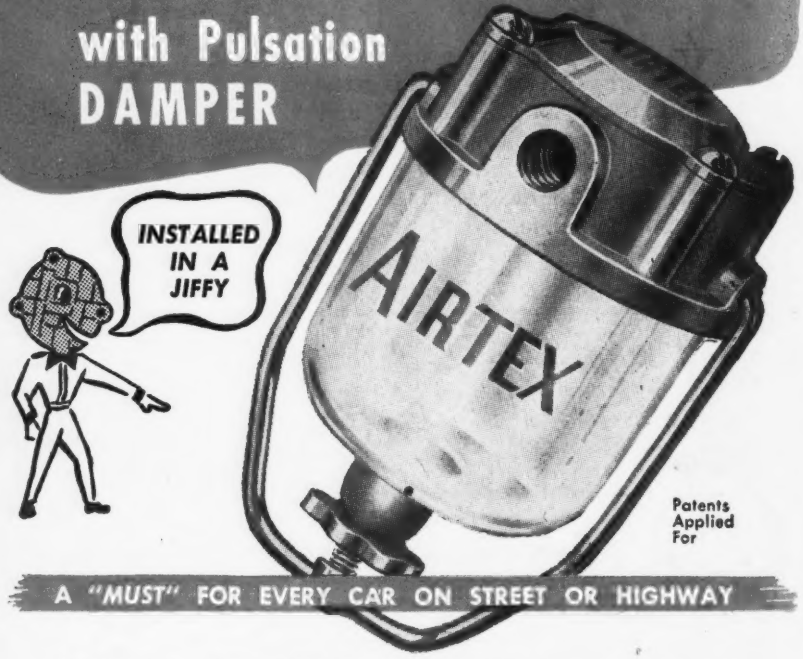
YOU: Saves wear and tear on the carburetor, insures its long life and accurate performance, reduces strain on fuel pump diaphragm and other parts, and promotes smoother engine operation.

MOTORIST: O.K.! Put in the new needle valve and *install an AIRTEX gasoline filter.*

No Car or Truck should be without this Revolutionary—

AIRTEX GASOLINE FILTER

with Pulsation DAMPER



A "MUST" FOR EVERY CAR ON STREET OR HIGHWAY

- Acts as a shock absorber in the fuel line, overcoming fuel pump pressure pulsations and delivering an EVEN, SMOOTH FLOW OF FUEL to the carburetor.
- Removes dirt, lint, water, abrasive particles and other foreign matter from the gasoline.
- Prevents motor failure due to carburetor clogging and flooding. Reduces wear and tear on carburetor, motor and fuel pump.
- The only filter equipped with *PULSATION* DAMPER, self-cleaning action and porous metal filtering element.

Attractive Display Assortment of 12 Filter Dampers Available

Contains 5 Types That Will Service 90% of Motor Vehicles

AIRTEX AUTOMOTIVE DIVISION

Chefford Master Mfg. Co., Inc. • Fairfield, Illinois

Sell AIRTEX Fuel Pumps, equipped with 50,000 Mile Guaranteed Diaphragms

A Masterpiece of the Cabinetmaker's Art

The New DELCO RADIO Combination



LOOK at it as a piece of furniture and you'll see that the new Delco Radio Combination is outstanding in the field. The grace and distinction of its 18th-Century design . . . the superlative materials and workmanship . . . make it a handsome addition to the finest home.

Listen to it as a musical instrument and you'll find that the new Delco Radio Combination lives up to all the promise of its appearance. It brings a new richness and clarity of tone to both recordings and radio broadcasts.

This new Combination has 14 tubes plus rectifier . . . automatic tuning on *both* AM and FM . . . three short-wave bands . . . a 15-inch speaker . . . 12 different bass and treble combinations . . . and advanced engineering throughout. The record player handles fourteen 10-inch or ten 12-inch records, and shuts off automatically after the last record plays. A special lightweight tone arm with *jeweled-point* pick-up makes recordings sound better and last longer.

The new Delco Radio Combination is available in two models: R-1251 in walnut, and R-1252 in mahogany. Until you've seen them and the other popular Delco radio models, you haven't seen *the best of all that's new in radio!*

DELCO RADIO

A GENERAL MOTORS PRODUCT

Delco radios are distributed nationally by United Motors Service. See your United Motors distributor about the Delco radio line.

UNITED SERVICE MOTORS

Another big feature of the PEDRICK FRANCHISE DEALER PLAN





All the SALES HELP you want to bring in ENGINE JOBS!

Look what you get as a Pedrick Franchise Dealer! Not only "Heat-Shaped" Rings that will make any weary engine behave like new . . . plus the industry's most liberal ring-and-labor guarantee . . . plus an up-to-date Engine Repair Manual, with timely service information by mail . . . but also a lot of carefully-planned material to help you advertise locally and keep engine repair business rolling into your shop!

Wall banners, window signs, franchise certificate, dashboard stickers, mailing cards, newspaper mats, publicity write-ups and movie slides are some of the things available. Featured over and over in all this material is the Pedrick dealer identification sign. When you use the sign in your local advertising and display the sign outside your shop you get double value!

Pedrick leaves nothing undone to make fine piston rings and to help you attract profitable engine repair work to your shop. Ask your Pedrick jobber now for the full story on the Pedrick Franchise Dealer Plan. WILKENING MANUFACTURING CO., Philadelphia 42, Pa. *In Canada:* Wilkening Manufacturing Co. (Canada) Ltd., Toronto.

For 27 Years, Supplier of Piston Rings to Leading Vehicle & Engine Manufacturers

Pedrick

"HEAT-SHAPED" PISTON RINGS

Big News from Blackhawk!

Bigger Earnings for You Mechanics and Shop Owners



NEW Tradition-smashing Blackhawk Nugget Socket Wrenches are back in a sensational new design. Take a look at the new palm-fitted, non-slip handle! "Feel" how comfortably it will snuggle into your hand! No ugly grease-catching cross-knurls or blister-raising edges. And that Bullet Case is designed for work — carry it to the job—roll it as you work—"scoop" the wrenches out with ease. These are just a few of the extras you get in the new Nuggets. *And, most important,* super-strength Nuggets (made of Hexite steel) do all general work — their double-duty drive eliminates all need for either 3/8" or 1/2" drive wrenches—saves you 40% on your wrench investment. Ask your Blackhawk Jobber to show you how Nuggets save you money.

A Product of BLACKHAWK MFG. CO., DEPT. W677, MILWAUKEE 1, WIS.

BLACKHAWK *Birthplace of Equipment Styling*

No. 4 of a Series of Messages to CHRYSLER DEALERS:



CHRYSLER'S SAFE-GUARD BRAKES

are a feature buyers acclaim!

Chrysler brakes give *controlled* self-actuating brake action, they are always in positive control by the driver and the smoothness and softness of their performance is amazing. A touch on the pedal, and the big car eases to a gentle stop.

Brakes like these not only have positive stopping power—they have positive *selling* power! And they're just one of many features that keep Chrysler *the car most owners want to buy again.*

Year after year, Chrysler gets there first with the developments people want. That kind of engineering—imaginative and forward-looking—means money in the bank for you. It's the best kind of backing a dealer can have.

CHRYSLER DEALERS GET THE GOOD THINGS FIRST!

Owner Satisfaction Like This Makes Long Lasting Friends

"Past performance was all the reason I needed to buy another Chrysler, I have been an owner of Chryslers for years." B. A.—Baltimore

"Best car I ever drove!" P. S.—Chicago.

"Chrysler is the nicest performing car I've owned and I've tried just about all of them." P. J.—Detroit

"My new Chrysler is superb. We are thrilled at its beauty and amazed at its performance." R. H. S.—Waukesha, Wis.

"This is the fifth Chrysler I have bought. I like this car very much—ease of riding, ease of handling." J. L. F.—Los Angeles

CHRYSLER
DIVISION OF
CHRYSLER CORPORATION

WORK WITH THESE ADS— THEY'RE WORKING FOR YOU!



"ETHYL"* Cleaner's great car washing campaign will help you make money 2 ways this summer



Here's how to clean up in car washing time

MONEY MAKER NO. 1
Sell "ETHYL" Cleaner

—it's the new, safe, instant-sudsing car wash. (And every bottle you sell nets you 40% profit.) Put up "ETHYL" Cleaner signs—work with these ads. They're selling your customers new "ETHYL" Cleaner . . . and the profit goes to you!

MONEY MAKER NO. 2
Sell Car Washing

—build your regular wash-rack business. (Use "ETHYL" Cleaner. Saves time. Saves work. More profit for each job done.) Work with these ads. They're selling your customers pride in a clean car . . . and the profit goes to you!



Register-Ringing Reminder

Sell "ETHYL" Cleaner to women, too. It's tops in the house for dishes, glassware, pots and pans—woolens, rayons, nylons—rugs and upholstery—enamel surfaces, refrigerators, stoves—windows and mirrors. Instant suds in any water—and kind to hands, too.

*REG. U. S. PAT. OFF.

ANOTHER "ETHYL" PRODUCT

ETHYL CORPORATION
405 LEXINGTON AVENUE, NEW YORK 17, N. Y.

"More than a



The
Original Equipment
Line

"doubled our sales..."*

HERE'S WHY WE CALL IT "Sta-ful"

★ **Fibre-glass mats help to keep the power-producing material from shedding—add to battery life. This makes possible a smaller sediment well at the base of the battery which, in turn, permits room for a liquid reservoir with over 3 times the usual capacity at the top of the battery.**

★ **This larger reservoir keeps plates covered and active long after the plates in ordinary batteries are exposed and inactive. Because of its revolutionary new design, the Auto-Lite "Sta-ful" Battery needs water only 3 times a year in normal car use; its extra plates deliver added power.**

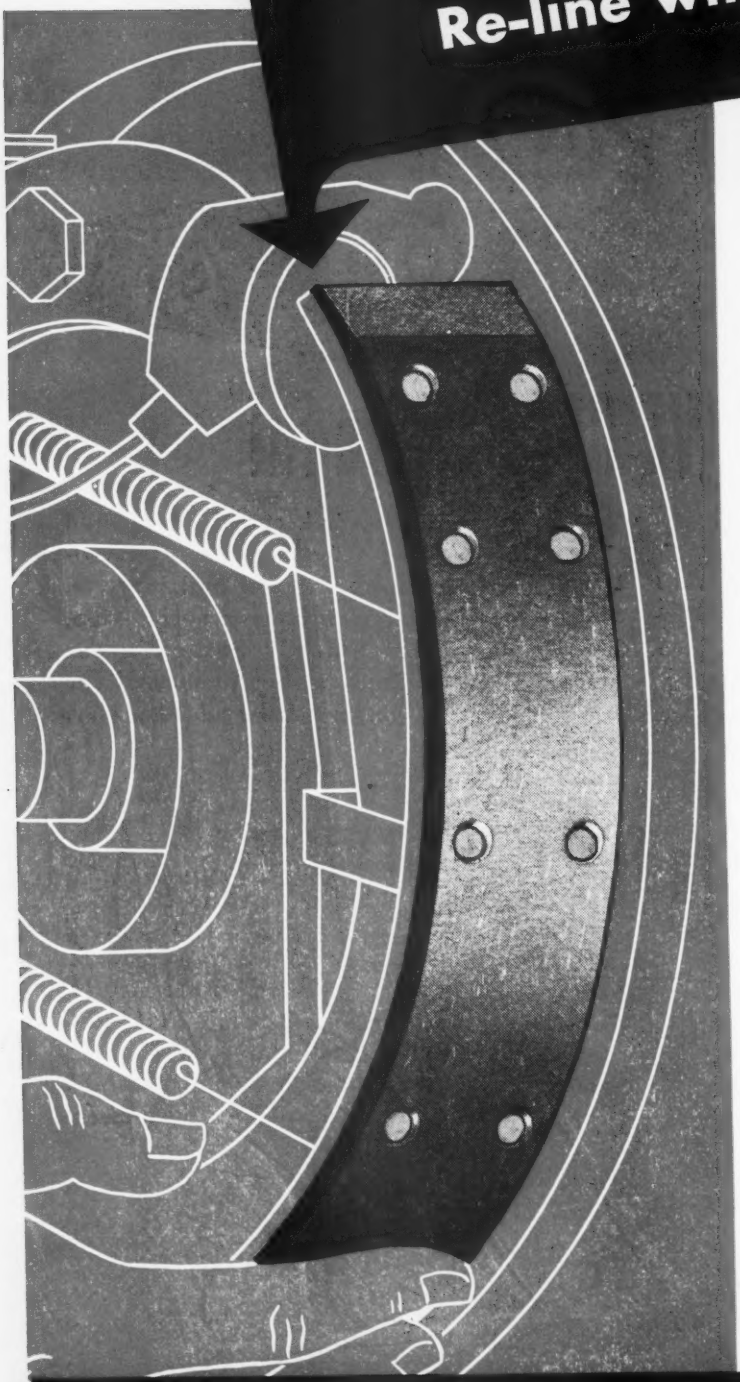
HERE'S WHAT "Sta-ful" DOES FOR YOU

★ **The Auto-Lite "Sta-ful" Battery drastically reduces the time and bother of battery servicing. Its exclusive features give you a sales leader with excellent profit possibilities backed by the greatest promotion campaign in Auto-Lite history.**

★ **One big reason why batteries fail is lack of water. Ordinary batteries frequently need water added once a month, but most people just won't take time to have it done. That's why the Auto-Lite "Sta-ful" principle means more satisfied customers.**

**From an unsolicited testimonial written by* J. W. OLIVEROS, *Oliveros Motor Service, N. E. 2nd Ave. and 18th St., Miami, Fla.*

Build Yourself a Name For The Finest Kind of Brake Work... Re-line with Thermoid!



The finest kind of brake work is *new car brake performance!* That's what you get when you re-line with Thermoid. For Thermoid Brake Sets are custom-built . . . certified correct by the famous Pittsburgh Testing Laboratory. And Thermoid's Precision Processing duplicates the accurate methods of new car manufacturers. Every job is "right the first time" . . . without any need for readjustments.

Thermoid

Custom-Built Brake Lining Sets
***Plus* "Precision Processing"**
***Equals* Brake Perfection**

Thermoid Company, Trenton, New Jersey

Copyright 1947—Thermoid Company

Thermoid • The Lining That Gives You The Brakes



Quick Starts . . . Long Life

WILLARD BATTERIES — Automobile Truck and Bus • Radio • Motorcycle Tractor • Aircraft • Marine • Diesel Stationary — Sold and serviced by Willard Dealers everywhere.

"SAFETY-FILL" BATTERIES

Willard

Dependability • Performance • Long Life

WILLARD STORAGE BATTERY CO. • CLEVELAND • LOS ANGELES • DALLAS • TORONTO

NEW! *Self-Locking Wing Nuts*

FOR DETACHABLE OR ADJUSTABLE ASSEMBLIES



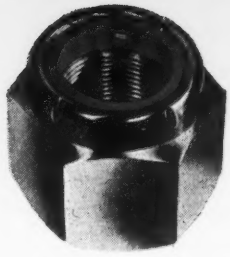
FOR USE ON:
Automobiles
Electrical Equipment
Children's Toys
Household Appliances
Office Equipment
Garden Accessories
Furniture

—with a Nylon Red Elastic Collar that provides dependable REUSABILITY!

Self-locking wing nuts fulfill a long-standing need. Many detachable or adjustable assemblies require the convenience of a wing nut. Yet, such assemblies have always suffered from the inability of ordinary wing nuts to stay tight. ESNA has provided the answer to this problem with a self-locking, self-sealing Wing Nut with a reusable Nylon Red Elastic Collar.

The new ESNA Wing Nuts—like all Elastic Stop Nuts—remain self-locking against Vibration, Impact and Stress Reversal in both fully seated and positioned settings. Yet, they are readily removed by hand. They do not deform the bolt, damage the threads or gall the finish.

Many opportunities exist to improve finished products and to increase their serviceability through the use of ESNA Wing Nuts. They will eliminate all wear now caused by loosened fasteners . . . permit accurate final adjustments, easy removal for quick replacements and product redesign for faster assembly. Leading industrial distributors are stocked and ready to serve you. For further information address: Elastic Stop Nut Corp. of America, Union, N. J. Sales Engineers and Distributors are located in principal cities.



LOOK FOR THE RED COLLAR
THE SYMBOL OF SECURITY

It is threadless and dependably elastic. Every bolt—*regardless of commercial tolerances*—impresses (does not cut) its full thread contact in the Red Elastic Collar to fully grip the bolt threads. In addition, this threading action properly seats the metal threads—and eliminates all axial play between the bolt and nut.

All ESNA Elastic Stop Nuts—*regardless of size or type*—lock in position anywhere on a bolt or stud. Vibration, impact or stress reversal cannot disturb prestressed or positioned settings.



ELASTIC STOP NUTS


INTERNAL WRENCHING


ANCHOR


WING


SPLINE


CLINCH


GANG CHANNEL


CAP

PRODUCTS OF: **ELASTIC STOP NUT CORPORATION OF AMERICA**

MERCHANDISED AND NATIONALLY ADVERTISED
FOR SPEEDIER, MORE PROFITABLE SALES!



THE *SANTAY* "S.E." Automatic Cigar Lighter, Replacement Cartridge, and Replacement Unit are in big demand *right now!* Strongly merchandised in attractive 3-color display cartons and backed by powerful national advertising in LIFE magazine, these fine Santay Products are selling fast and profitably, everywhere. Placed in prominent store locations the new *tested* display cartons catch the customer's eye, make the sale, in fact do just about everything but wrap the package and make the change. Try it and see!

The "S.E." Replacement Cartridge will make manually operated Lighters fully automatic in all 1938, 1939, 1941, 1942 and 1946 Ford cars. It is also a fine precision replacement for automatic lighters *in all cars* except Lincoln and Mercury. Phone or wire your orders today. Enormous production assures quick deliveries in any quantities.



SANTAY CORPORATION

365 NORTH CRAWFORD AVENUE • CHICAGO 24, ILLINOIS

REPRESENTATIVES: S. F. BACHER & CO., 310-16 SPADINA AVE., TORONTO, ONT., 2B, CANADA • J. B. BAUMANN, 897 PRINCETON ROAD, WOODMERE, L. I., N. Y. • S. C. BERWANGER, 1874 - 24th AVE., NORTH, SEATTLE, WASH. • R. C. BOARD, 1646 COWLING AVE., LOUISVILLE 5, KY. • C. M. BUETTNER, 326 LAW BUILDING, KANSAS CITY 6, MO. • W. W. CARRON, 2636 S. MICHIGAN AVE., CHICAGO 16, ILL. • I. D. KELLY, 759 S. GAYLORD ST., DENVER 9, COLO. • W. S. KNEAVEL, 600 N. EUTAW ST., BALTIMORE 1, MD. • LAWSON-ABBOTT, 2017 CEDAR SPRINGS, DALLAS 1, TEXAS • R. C. SCHAYER, 1710 SO. FLOWER ST., LOS ANGELES 15, CALIF. • H. G. VAUGHN, 307½ ROSWELL ROAD, P.O. BOX 67-N. SIDE BRANCH, ATLANTA, GEORGIA • H. D. WEISS, 18100 FAIRFIELD AVE., DETROIT 21, MICHIGAN

IN SELLING...NOTHING SUCCEEDS

"AMERICA'S SPARK

EXCELS ALL PERFORMANCE

IT PAYS TO STOCK

LIKE A PREFERRED PRODUCT

FAVORITE PLUG"

OTHERS IN AND SALES

AND SELL IT!

CHAMPION SPARK PLUG COMPANY



TAKE A TIP FROM ONE WHO SPEAKS FROM EXPERIENCE

For Better Brakes..

AN UNBEATABLE COMBINATION!

Wagner

LOCKHEED HYDRAULIC BRAKE PARTS

Wagner Lockheed Master Cylinder and Wheel Cylinder Kits include all essential parts for a specific job. Also available as individual parts and as completely assembled cylinders.

Wagner

LOCKHEED NO. 21 BRAKE FLUID

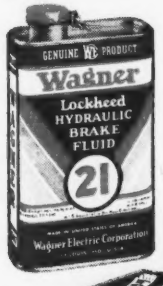
An all-season fluid that functions perfectly under all driving temperatures. Used by car manufacturers and recommended for all hydraulic brakes.

Wagner

CoMaX BRAKE LINING

Unsurpassed for quick, safe, smooth stops. Long-lived because the ingredients wear slowly; doesn't compress or swell; uniform frictional qualities. Produced in rolls, blocks, sets or slabs. For details, consult nearest Wagner jobber, or write us.







Wagner Electric Corporation
6498 PLYMOUTH AVE., ST. LOUIS 14, MO., U. S. A.



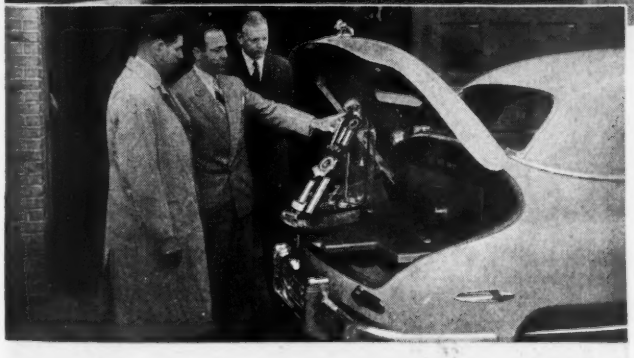
LOCKHEED HYDRAULIC BRAKE PARTS and FLUID · NaRol
CoMaX BRAKE LINING · AIR BRAKES · TACHOGRAPHS
ELECTRIC MOTORS · TRANSFORMERS · INDUSTRIAL BRAKES

A47-2

Thompson's New Merchandising Cars "Bring the Factory to your Door"

Thompson field men accompanied by TP Jobber Salesmen are calling on repairmen everywhere with this "Show on Wheels".





The specially designed rear compartment opens to give you the latest facts on jet propulsion. Ultra-modern plastic cases carry exhibits of the newest developments in engine and chassis parts. The famous Thompson Trophy Race, and Thompson's Historic Old Car Museum are highlighted in Kodachrome.

A **FLEET OF SPECIALLY BUILT CARS** is touring the country. These cars—just as fast as they can get around—are driving into repair shops to help repairmen become better mechanics—better merchandisers.

There's a lot of valuable information packed into these big black and yellow "M-Cars". When one of them rolls up to your door, it will pay you to put out the welcome mat and give the driver a little of your time.

Get it from Your **Thompson Products** *Distributor*

CLEVELAND • DETROIT • LOS ANGELES

Don't say "MUFFLER..."



* "INDIVIDUALLY TUNED" TO EACH

say . . .
WALKER SILENCER

"I.T." *Makes the Difference—!*

The superior performance of Walker "Individually Tuned" Silencers is the direct result of a revolutionary and exclusive standard of engineering and design based upon fully protected United States patents. It cannot be duplicated. No other mufflers give finer sound control within the limits of permitted back pressure. No other mufflers are more minutely accurate in physical dimension and internal construction. No other mufflers more completely meet the requirements of modern automobile and truck engines. I.T. does make the difference.



WALKER MANUFACTURING COMPANY OF WISCONSIN
RACINE, WISCONSIN

Also Makers of Walker Jacks and Lifts

MAKE AND MODEL OF CAR

THERE'S MORE PROFIT



The King Ring Line includes Engineered Sets, Rebore-Rebuild Sets and Service Special Sets . . . the right ring for every job, for every make and model of motor.

MORE PROFIT IN THE RING LINE



Rebore-Rebuild Expander Piston Rings with Iron Expander Rings.



Service Special Piston Rings with Steel Expanders for Dealers' Service Department.



Engineered Set Piston Rings for Re-Ringing.

IN THE KING LINE!



MORE *PROFIT* IN THE COMPLETE LINE

The complete King Line includes Pistons, Pins, Motor Bearings, Valves, Cylinder Sleeves, Water Pumps and Parts, Front End Parts and Shackles... all in one catalog from one jobber. That's real service!

KING QUALITY

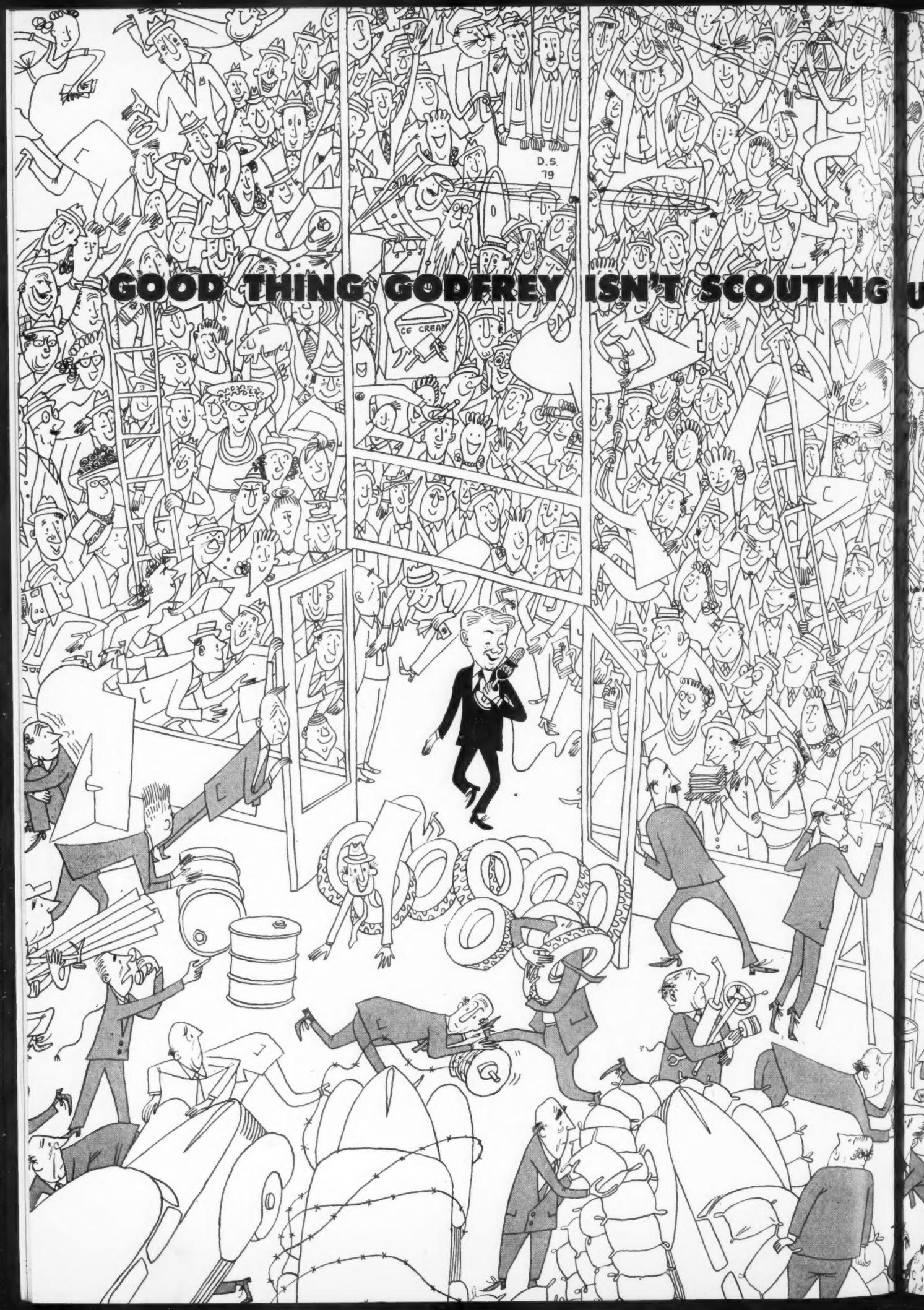
"Building for the future on a 27 year record"

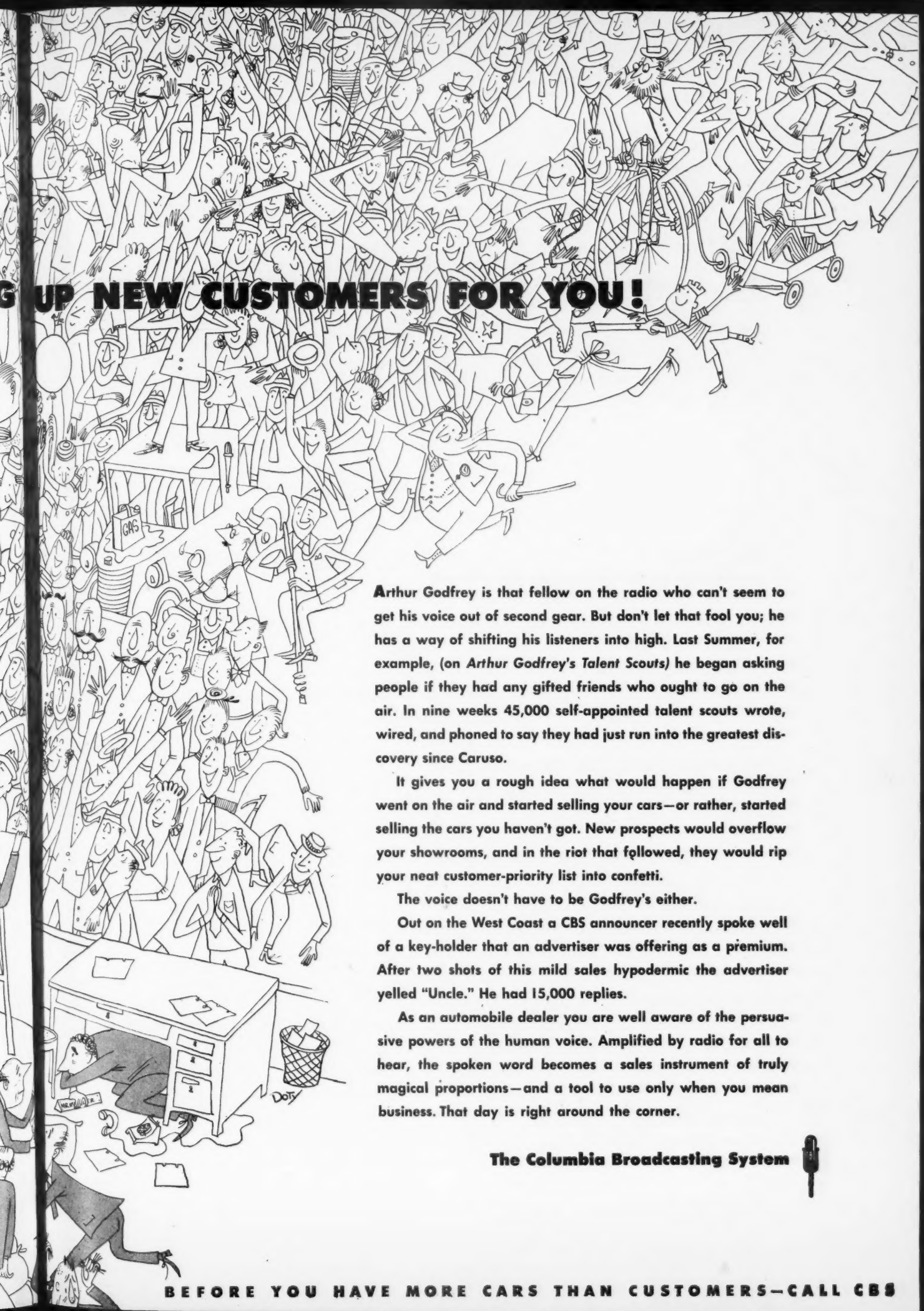
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PISTON RINGS • PISTONS • PINS • VALVES
BOLTS • BUSHINGS • SILENT-U SHACKLES

KING QUALITY PRODUCTS

BEARINGS • WATER PUMP PARTS
SLEEVES • WHEEL SUSPENSION PARTS


GOOD THING GODFREY ISN'T SCOUTING U
D.S.
79
ICE CREAM



G UP NEW CUSTOMERS FOR YOU!

Arthur Godfrey is that fellow on the radio who can't seem to get his voice out of second gear. But don't let that fool you; he has a way of shifting his listeners into high. Last Summer, for example, (on *Arthur Godfrey's Talent Scouts)* he began asking people if they had any gifted friends who ought to go on the air. In nine weeks 45,000 self-appointed talent scouts wrote, wired, and phoned to say they had just run into the greatest discovery since Caruso.

It gives you a rough idea what would happen if Godfrey went on the air and started selling your cars—or rather, started selling the cars you haven't got. New prospects would overflow your showrooms, and in the riot that followed, they would rip your neat customer-priority list into confetti.

The voice doesn't have to be Godfrey's either.

Out on the West Coast a CBS announcer recently spoke well of a key-holder that an advertiser was offering as a premium. After two shots of this mild sales hypodermic the advertiser yelled "Uncle." He had 15,000 replies.

As an automobile dealer you are well aware of the persuasive powers of the human voice. Amplified by radio for all to hear, the spoken word becomes a sales instrument of truly magical proportions—and a tool to use only when you mean business. That day is right around the corner.

The Columbia Broadcasting System

BEFORE YOU HAVE MORE CARS THAN CUSTOMERS—CALL CBS

Smart Tip about a Prize Package!



White sidewall tires, as illustrated, will be supplied at extra cost as soon as available.

Let's square up to the facts, just for a minute.

It's plain there's no smarter-looking car than a Buick – either on the road today or coming very soon.

It's clear that these long, clean lines, these sweeping, follow-through fenders, are no mere passing fancy but a solid style *trend* for years to come.

Buyers can scour the town – and not find livelier, silkier, more abundantly ready power than's on tap in this big Fireball straight-eight engine.

They can check this husky on the roads – and find that nothing on wheels makes the bad ones behave like Buick's feathery coil springing all around.

They see how taut and weaveproof and quiet the Silent Zone mounted bodies are;

how solid and strong are the husky frames, stout axles, the whole "business" side of this beauty!

And once a prospect gets behind the wheel to test its ease of handling, and the quick, sure action of brakes and gearshift – once he sizes up the room of three-person seats, the comfort of deep cushions, the stability that only ample roadweight can give – then he knows this:

Clearly, here's a prize package of such proportions it's bound to find fresh "takers" as fast as deliveries can be made. Here's a car that's certain to sell on a first-come-first-served basis for a long while to come.

That's why new buyers every week are getting their orders in for Buick as fast as deliveries are made – or even faster.

When better automobiles are built **BUICK** will build them

Tune in HENRY J. TAYLOR, Mutual Network, Mondays and Fridays

BUICK DIVISION OF GENERAL MOTORS

ONLY BUICK HAS *ALL* THESE

STAR FEATURES

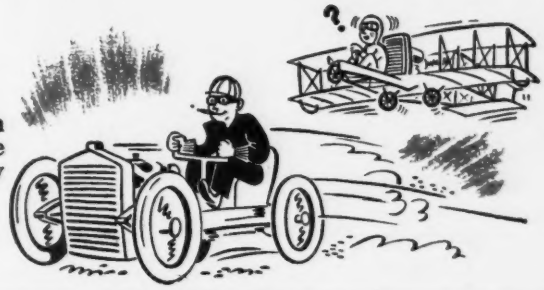
★ AIRFOIL FENDERS ★ FIREBALL POWER
★ ACCURITE CYLINDER BORING ★ BUICOIL SPRINGING
★ STEPON PARKING BRAKE ★ CURL-AROUND BUMPERS
★ PERMI-FIRM STEERING ★ FLITEWEIGHT PISTONS
★ DEEPFLEX SEAT CUSHIONS ★ BROADRIM WHEELS
★ FULL-LENGTH TORQUE-TUBE DRIVE
★ SILENT ZONE BODY MOUNTINGS
★ NINE SMART MODELS ★ BODY BY FISHER



IT'S RUMORED THAT

planes have always been faster than cars!

Definitely not true! When the Army bought its first plane in 1909, specifications called for a top speed of 40 mph. The auto speed record at that time was 91.4 mph. set by Henry Ford's famous 999 driven by Barney Oldfield.



IT'S RUMORED THAT

of all rings tried on a fleet of 702 trucks, Perfect Circles were found best for worn and old engines!

We quote "Much has been said about the good job PC Rings have done in automobiles. The same can be said about trucks of all makes. We have 702. After trying every make of ring, the final outcome is Perfect Circle. Our service department now maintains a large stock of these fine PC rings."

Contributed by D. L. Nielson, Downey, California



IT'S RUMORED THAT

pills will soon replace steak dinners!

"Not if the eaters of America have their way!" comments J. C. Stentz, First Vice President of John Morrell & Co., Meat Packers. "How would *you* like to order a steak and have the waitress ask you if you want it well-done, medium or rare . . . meaning a gray pill, a brown pill or a red pill?"



IT'S RUMORED THAT

there'll be two cars in every garage by 1950!

Now, who do you suppose pulled that old chestnut out of the fire? Anyway, we asked just about every politician we know and, believe it or not, they aren't talking. So just draw your own conclusions.



Perfect Circle Corporation, makers of Perfect Circle *Custom Made* Piston Ring Sets, will pay fifty dollars ($50) for each rumor, fact or fiction, accepted for this page. Send your rumor to Rumor Page, Perfect Circle, Hagerstown 11, Indiana. All contributions become our property and cannot be returned or acknowledged.

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TO
DEPENDABLE SOLDER REPAIRS



KESTER CORED SOLDERS

● Kester Cored Solders provide the fast, long-lasting repair jobs that save you time in the shop and assure customer satisfaction. These easily applied, flux-filled solders are top favorites in the biggest and best automotive service shops.

● Applied in one virtually mistake-proof operation, Kester Cored Solders result in clean, tight solder bonds that stand up against shock, twisting, bending, vibration, and the expansion and contraction of temperature extremes.

● Kester Acid-Core Solder is the general purpose solder for all-around automotive repairs. Kester Rosin-Core Solder is specially compounded for electrical work. It contains a patented, plastic rosin flux that will neither cause corrosion nor injure insulation.

● Keep Kester Cored Solders on hand in the shop at all times. They point the way to decreased shop overhead and increased customer confidence. Order from your jobber today.

KESTER SOLDER COMPANY
4242 Wrightwood Ave., Chicago 39, Illinois
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KESTER
Cored Solders
FOR EVERY AUTOMOTIVE USE

MOTOR AGE
With Which Is Combined AUTOMOBILE TRADE JOURNAL

FOR AUTOMOTIVE SERVICEMEN

VOL. LXVI, No. 8 July, 1947

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CHECK THE HEAT RANGE OF ALL PLUGS

When Changing Oil Filters





Here *is* an opportunity! Better gas, longer mileages, and normal driving speeds call for a "cooler" type of improved AC Spark Plugs. Plugs of a Heat Range that did a job in the days of lower octane gas and slower driving are too "hot" today. They are likely to split, blister, misfire, and cause preignition.

There are millions of these "wrong Heat Range" plugs still in use. Plenty are in your neighborhood. GET 'EM OUT! *You'll sell new plugs!*

Check the Heat Range of *all* plugs on every car, truck, bus, and tractor that comes in for *any* kind of service. Check it against the AC Specification Chart—*and be sure.*

ALWAYS CHECK HEAT RANGE

- ★ When CHANGING OIL FILTERS
- ★ When RINSING AIR CLEANERS
- ★ When CLEANING FUEL SYSTEMS
- ★ When CRISS-CROSSING TIRES
- ★ On every BRAKE JOB
- ★ When CHANGING FAN BELTS
- ★ When you give a WASH
- ★ When you CHANGE OIL
- ★ When you LUBRICATE
- ★ When you SERVICE A BATTERY
- ★ When you TUNE UP and REPAIR
- ★ When CHECKING ANTI-FREEZE
- ★ When CHECKING OIL

AC

SPARK PLUGS

AC SPARK PLUG DIVISION — GENERAL MOTORS CORPORATION

For minimum wear, also...



NOT 2...



NOT 6...

but 26 basic designs

OF SEALED POWER PISTON RINGS

including the most efficient sectional steel oil ring ever built—the MD-50

Every man is entitled to his own ideas about minimum wear on bathing beauties—but minimum wear on cylinder walls is an absolute requirement for BALANCED PERFORMANCE by piston rings. So are oil control, blow-by control, and low friction. You get all four in Sealed Power Individually Engineered Ring Sets, made up from twenty-six (26) basic designs of piston rings. Whatever the make, model or cylinder wear condition, there is a Sealed Power Set specifically engineered to do the best possible job. Sealed Power has been refining these sets for years, has been producing rings for car, truck and engine builders 36 years. For best results, re-power with Sealed Power motor parts. Sold by leading distributors. Sealed Power Corporation, Muskegon, Mich. In Canada: Stratford, Ont.

Piston Rings, Pistons, Cylinder Sleeves, Piston Pins, Valves, Water Pumps, Bolts, Bushings, Tie Rods, Front End Parts



One of the 26 basic rings is the famous MD-50—the finest sectional steel oil ring ever built. The MD-50 has a cast iron spacer with an exclusive tapered channel design which assures better oil drainage and prevents clogging.

INDIVIDUALLY ENGINEERED



SEALED POWER PISTON RINGS

BEST IN NEW CARS! ★ BEST IN OLD CARS!

Keep your War Bonds!
Get $4 for $31

MOTOR AGE
JULY 1947



NEWS BULLETIN

★ Ford has placed contracts for 24 parts in California. These parts totaling 50 million dollars are in addition to their 22 million now being spent on the West Coast.

★ Willys, by the installation of new conveyor system, expects to increase Jeep production 25 per cent. New installation to be completed early in August.

★ Kaiser Frazer built 12,039 cars in June, breaking previous records and operations are in the black for the second quarter.

★ Gas rationing again hits middle-west, as fuel shortage becomes acute.

★ For the first time since the Democrats took over in Washington, the Federal Government ended the fiscal year with cash in hand instead of an astronomical deficit.

★ GM in the first six months of the year produced 921,929 cars and trucks in U. S. and Canada.

★ Tucker Corporation has gotten the green light from the S.E.C. on plans to finance new auto. Will sell 4 million shares at 5.

★ Packard has set a suggested price of $2975 at Detroit for its new super-eight convertible.

★ Loss of one day's production because of the July 4th holiday and plant closings because of steel shortages and coal strikes, reduced car output to the lowest total of any week since early January.

★ Chevrolet raises truck prices $26 to $162.

★ Construction of new roads increased 45 per cent in April over last year.

★ National Industrial Conference Board believes there will be no important price cuts this year.

★ If strikes don't interfere, Chevrolet expects to build close to one million cars and trucks.

★ Ford has increased prices on its 8-cylinder Station Wagon to $1735.37 from $1616.46.

Slants on the NEWS

Resale Value of Used Cars Influences Styling Trends

While the public generally is expecting radical styling changes in new models the industry itself indicates that changes will be gradual. A spokesman for one company says that the industry is quite realistic in recognizing that two old cars are sold for every new one and, if radical design changes were made, it would affect the trade-in value of old models and thus affect new car sales. He said that the influence of the used car market is an important one in styling new models and that his company has even gone so far as to survey used car dealers to find out what the public liked in its used cars. Several suggestions were later incorporated in new model styling with the result that used car sales have held up very well. Another important factor in new design is economy of parts transportation. A certain type fender for example may be discarded in favor of one of slightly different design that will "nest" for easy shipment. Nesting of parts is an important consideration in transportation cost of parts to distant assembly plants. This is becoming increasingly important for such companies as GM and Ford, both of which are expanding their network of assembly plants.

Industry Builds 6 Million Vehicles Since End of War

The automotive industry turned out its four millionth postwar car just two years and four days after the first postwar car was built July 3, 1945 by Ford Motor Co. During the same period 2.2 million trucks and buses have been built, bringing the total output of cars and trucks for the first two postwar years to 6,200,000 vehicles.

Tractor Industry Plans 100 Million Plant Expansion

With tractor manufacturers planning expenditures exceeding $100 million in plant expansion programs, which will increase tractor production more than 50 per cent over pre-war capacity, it behooves wholesalers to keep their eyes on this rapidly increasing market. There are now nearly 400,000 tractors in use. This compares to 148,000 in 1935 and 285,000 in 1940. There are a number of important factors behind this trend. Many farm workers have deserted the farms for the city and those remaining are demanding higher wages. Farmers are, therefore, forced to increased mechanization in order to get the work done. The increased use of tractors should have an important affect on stocks carried by jobbers in rural areas.

1947 New Passenger Car Registrations*

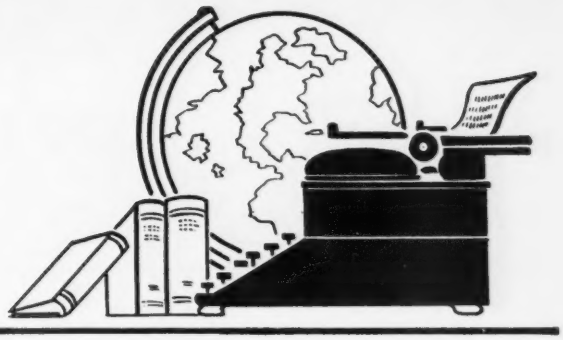
Complete returns for March and April
Arranged by Makes in descending order according to the four months' totals

Make	March	April	Four Months	
			Units	% of Total
Chevrolet	50,494	61,569	194,343	19.86
Ford	45,992	43,838	163,963	16.76
Plymouth	28,397	31,610	101,912	10.42
Buick	19,663	21,570	74,361	7.60
Pontiac	17,669	19,551	64,665	6.61
Dodge	16,762	19,402	62,955	6.43
Oldsmobile	15,696	16,402	58,970	6.03
Nash	9,892	11,132	36,490	3.73
Mercury	9,914	9,734	35,676	3.65
Studebaker	9,107	9,658	33,279	3.40
Hudson	9,424	8,720	32,114	3.28
Chrysler	7,779	8,723	29,141	2.98
De Soto	5,660	6,988	22,416	2.29
Cadillac	3,996	4,867	15,852	1.62
Packard	3,859	4,291	14,025	1.43
Kaiser	3,321	3,449	11,912	1.22
Lincoln	2,122	2,242	7,646	.78
Willys	1,738	2,419	6,910	.71
Frazer	1,771	2,450	6,796	.69
Crosley	1,403	1,544	4,652	.48
All Others	55	67	258	.03
Total	264,714	290,226	978,336	100.00

*—Data from R. L. Polk & Co.

NADA Survey Studies Car Dealer Situation

The N.A.D.A. after sampling some 375,000 customers' orders in 68 cities, stated that car dealers have on their books orders for twice as many new cars as they expect to get from their factories. The survey covered the period from July 1, 1945 to March 31, 1947. It showed that dealers have received only enough cars to fill 30 per cent of their orders. The survey also indicated that cancellations totaled about 16 per cent of the total booked. Surveys made by other observers placed this latter figure as high as 30 per cent.



Fisher Models Reveal Trend Of Young Designers' Ideas

At a recent exhibit of models entered in the Fisher Body Craftsmanship Guild Contest, H. J. Earl, GM vice president in charge of styling, commented that trends shown in many of the models embody many popular ideas that cannot be realized because of mechanical limitations. For example, several cars are designed to carry three persons far forward. Mr. Earl pointed out that the design is impractical because of space needed for turning radius of the wheels and to accommodate the engine and steering apparatus. A large proportion of the cars are designed for rear engine drive indicating the current trend in that direction in popular thinking. However, Mr. Earl pointed out that the problems of space and weight distribution involved indicate that the engine probably will remain in the front end for some time yet.

Industry Showing Interest In Lower Pressure Tires

Along with the trend toward smaller wheels of 15" dia., another development reported worth watching is a tire of larger cross section and lower air pressure. Some of the tire companies now are said to be experimenting with such tires running at pressures of 22 to 24 lbs. However, there still are some problems of safety such as "leaning" of the car when going around sharp curves and corners.

Industry in Watchful Waiting Attitude As Parts Sales Set New April Record

Statements by business executives on the general business situation seem to run the entire gamut from complete pessimism to subdued optimism. Some say we are now in a recession, others say it is just ahead, while the more optimistic declare there is nothing to worry about in the foreseeable future. The only point of agreement would seem to be that we have reached the peak of the postwar business boom.

Demand for virtually all items is still at boom levels. Tires are one of the few items on which prices have been cut, though increased discounts are becoming evident in a number of lines where competition among manufacturers has become unusually keen. Retail sales in general business are still 5 to 10 per cent higher than they were last year. Automotive parts sales were 145 million in April of the current year as compared to $108,620,000, an increase of approximately 33 per cent and nearly three times greater than the corresponding month in 1942. How much price increases affect these values is difficult to determine, though it must be admitted that they play an important part.

In attempting to evaluate the automotive situation and general business situation, it is important to give due consideration to the farms and small towns. Farm income is still at maximum levels. Corn has reached an all-time high and the food difficulties in Europe should assure continuing high prices for American farm products.

After thoughtful study of all these many factors, it would seem that total business volume should continue at extremely high levels, but it must be remembered that with more manufacturers, more wholesalers and more retailers competing in their individual fields that more aggressive selling and merchandising will be required if the individual establishment is to maintain a profitable operation.

*Motor Vehicle Factory Sales from U. S. Plants**

	Passenger Cars
January	247,130
February	266,237
March	301,810
April	314,372
May	284,403
Total—5 Months	1,413,952

	Trucks and Buses
January	102,332
February	107,550
March	119,467
April	108,410
May	98,782
Total—5 Months	536,541

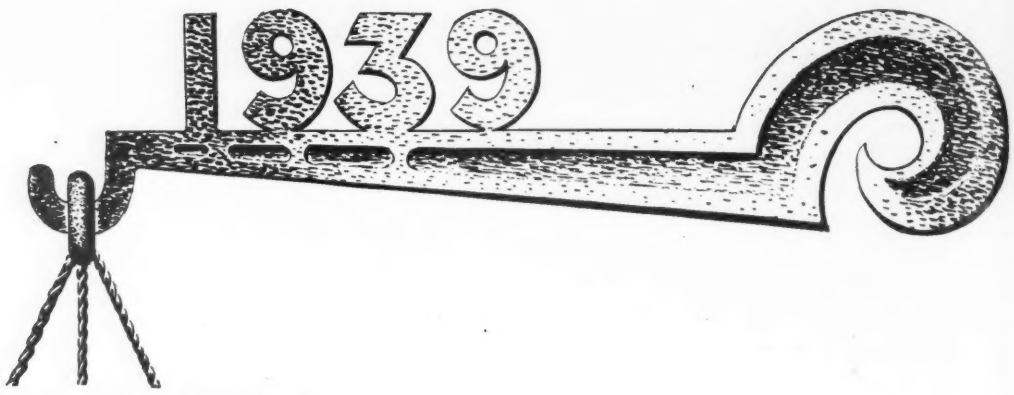
	Total Motor Vehicles
January	349,462
February	373,787
March	421,277
April	422,782
May	383,185
Total—5 Months	1,950,493

Weekly Motor Vehicle Production

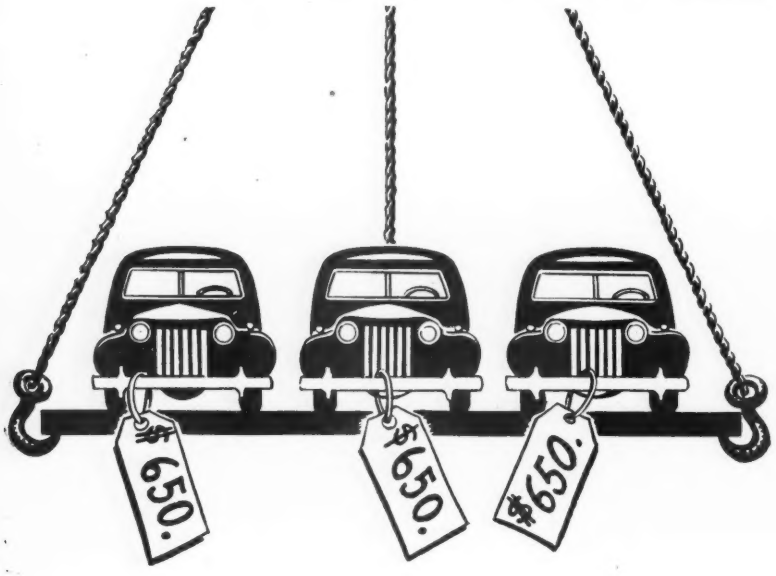
U. S. and Canada**

June 7	93,485
June 14	97,943
June 21	102,545
June 28	104,855

*Automobile Manufacturers Association.
**Wards Reports.



WHO KEEPS USED CAR PRICES UP?



BUYERS weighing car prices today, studying what they paid in 1940 and what they must pay at their local dealers today, become still more incensed as they note the prices of current model cars on used car lots. They blame the dealer, the car factory, everyone but themselves—and there—economically speaking—is where the fault lies.

Just as long as the buying public is willing to pay 20, 25 or 30 per cent above established list prices, so long will there be connivers to supply them.

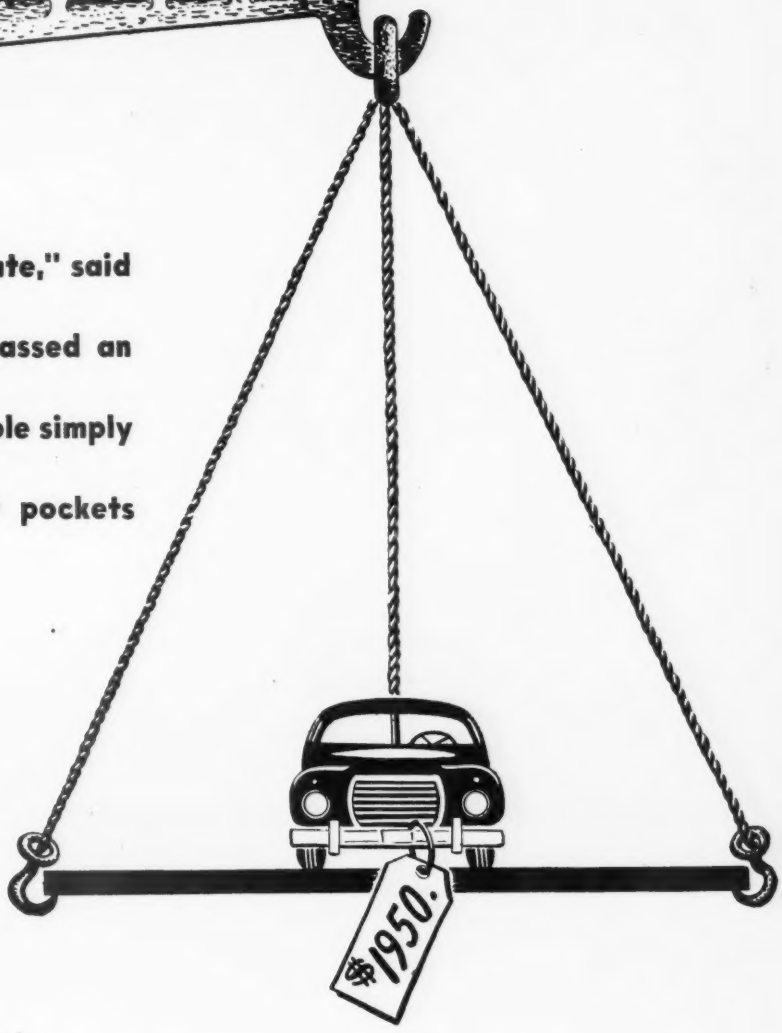
There is undoubtedly a great deal of hysteria and muddled thinking being done by some car dealers, the public and particularly, the daily press which are viewing with alarm the existing price situation in the field of slightly used new cars. In demanding remedial legislation they seem to have quickly forgotten how ineffectual the O.P.A. was in controlling car prices during the war. A review of proposed legislation would seem to indicate that they have nothing better to offer. In fact, some of the suggested remedies have been declared to be unconstitutional.

Advocates of "passing a law" overlook the fact that even during wartime, laws which carried the direct penalties were unsuccessful in dealing with the economic forces of supply and demand. Passing a law now penalizing anyone for selling a car above established list would only place hurdles in the way and make the used car operator boost his prices still higher in order to be paid for the additional risk.

It is indeed unfortunate that car dealers are universally blamed for the situation. Undoubtedly there are many who are making hay while the sun shines. But the great majority are doing everything within their power to deal honestly with their customers and keep the situation under control. The national, state and local associations are to be commended for their efforts in not only trying to keep the cars out of the hands of speculators, but also in their endeavors to inform the public of the true state of affairs.

And it is about time that some one handed out a large helping of praise to the manufacturers of the cars which are creating all the furor. If these men were the greedy hogs which some of our vote-seeking legislators try to make them out, there would be no used cars sold at higher prices than new cars. The new car price would have been raised to meet whatever the traffic would bear. But the manufacturers have kept their prices below the exorbitant level which the public is apparently willing to pay. This puts a capitalist manufacturer in the odd position of "selling ten dollar bills for eight dollars," as Charles E.

1947



"There's one born every minute," said P. T. Barnum, but no one passed an anti-Barnum law. Smart people simply kept their money in their pockets

by ***BILL TOBOLDT***

Wilson aptly phrased it in a recent address. There is no law which forces this action. Not even the economic law of supply and demand is forcing manufacturers to sell below what the market will pay. Their action springs solely from the firm belief that with increased production the market value of a car will drop immediately to a sensible level. They are demonstrating a faith in the economy to which so many of us are paying only lip service.

That the public is wrong in blaming the car dealer for the high prices of used cars, is clearly indicated by many surveys conducted by factories and the N.A.D.A. The car dealer is clearly a victim of circumstances as is shown by these surveys which show that the used car dealer is *not* obtaining his stock from the franchised dealer but from the general public who seems only too happy to sell his newly acquired car at a profit of several hundred dollars. Some of these car buyers are doing business on a relatively large scale, having orders in with many dealers and reselling the cars at a 25 per cent mark-up, shortly after delivery. An investigation made by the Philadelphia Automobile Trade Association indicates that one buyer out of every seven new car purchasers has taken delivery of more than one car.

There are many interesting stories dealing with the current situation. One points out that a clergyman had purchased 13 new cars and set up his own used car lot. Another story is of a woman who boasted that she had made $15,000 selling "new" cars. Politicians, bankers, business men and blondes, people in all walks of life, are making money reselling new cars and the franchised dealers are getting the blame for the situation.

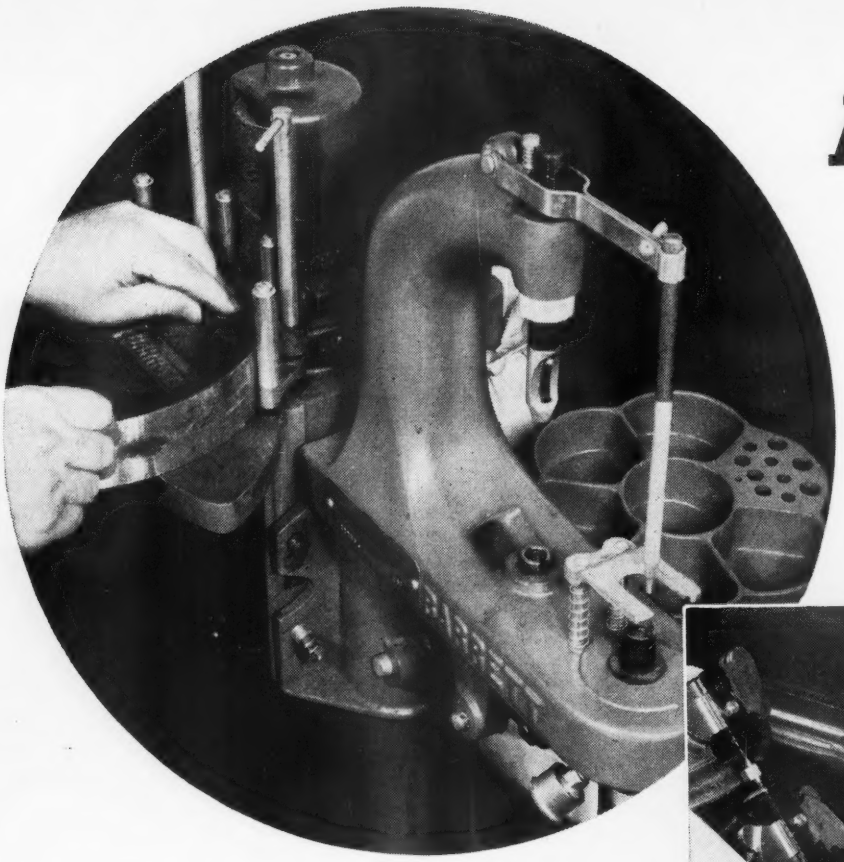
Actually, the car dealer has as little control of these car prices as King Canute did of the incoming waves of the sea.

There is only one thing that will bring car prices down and that is increased production in Detroit. Passage of the Labor Act over the President's veto should help as it will tend to stabilize labor and reduce tendencies of organized labor to strike.

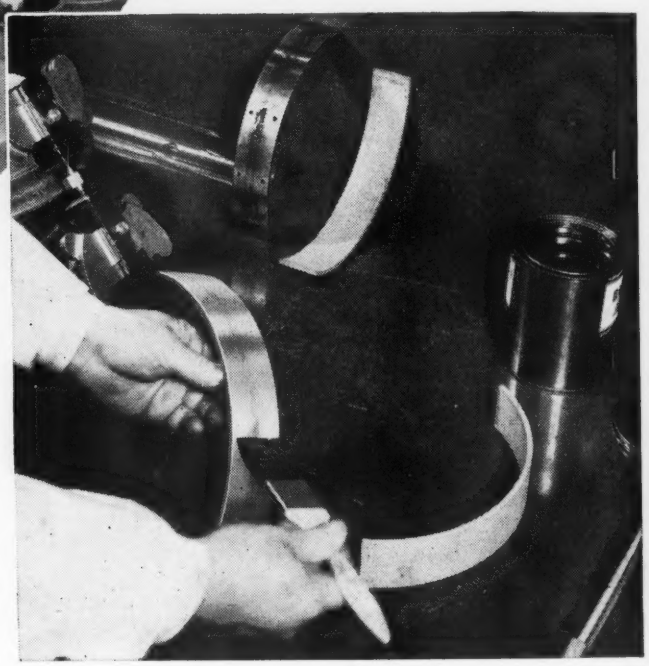
In addition the recent movement to publicize the local delivered prices of automobiles cannot fail to point up the large economic loss sustained by the purchaser of "slightly used new cars." This in itself should have a salutary effect on the present situation and help to bring it back to normal.

About this

This new process will



First step is to polish the shoe face to a bright finish on a rotating sand wheel. Guide pegs prevent gouging.



Showing one of the methods of applying the plastic adhesive. In this case it is painted on to cover the shoe face evenly and completely.

ATTACHING brake lining to the shoes by means of a cement (or bonding brake lining as it is called) instead of the conventional rivet, is undoubtedly one of the most spectacular post-war developments in the automotive field. All brake lining companies and equipment manufacturers are studying the new system and two models of the current Dodge truck line have already adopted the system as standard equipment.

How quickly other companies will elect to use this new method of applying lining to the shoes is problematical. Much depends on how the individual engineer regards the development and also on how quickly the service field can be supplied with the necessary equipment for relining the shoes.

by S. B. R. TAYLOR

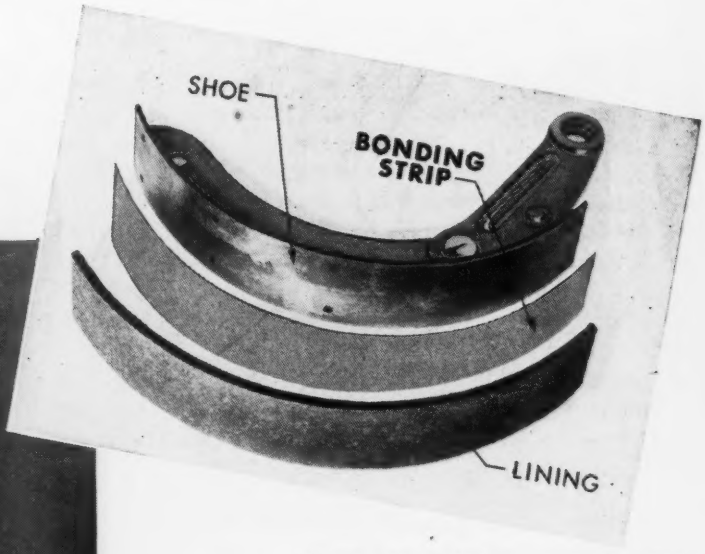
The process in addition to being simple and quick gives a considerable increase in lining life. It is said that the bonded lining can be used until there is only seven-thousandths of an inch of it left. This is in sharp contrast to riveted linings where half the available thickness is required by the rivets for holding the lining in place. The absence of rivet holes adds about ten per cent to the effective area of the lining. Users report that the drums are never scored and do not have to be trued up even when used in taxi service where the lining must be replaced six times a year.

The cost of the equipment needed for this radical departure in relining practice is nominal, except for the special electric bake oven, which costs in the neighborhood of $300. There seems to be no known case of the bond failing to hold the lining firmly and well; in fact, most of the kits supplied include a pneumatic chisel to remove the wafer of lining left when a new one is required. The problem of removing the old lining is still a hard one, however, although it would seem that a good power sander should do it easily.

For an indefinite period at least, brake service shops will be forced to have two types of equipment, one designed to handle the familiar riveted lining, and the other for servicing the bonded type of lining. In this connection it should be pointed out that brake lining

Brake Bonding Business

probably become the accepted way to unite brake lining to shoe within a few years



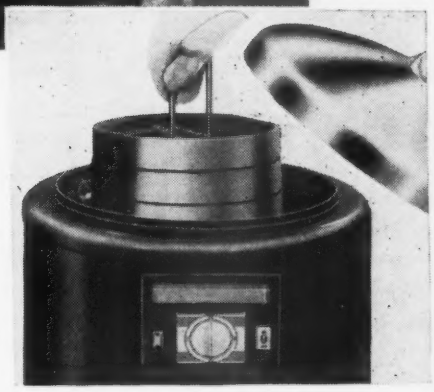
Showing the typical arrangement of lining, bonding adhesive, and shoe. This picture shows the bonding as a separate strip as used by some makers.

Clamping the brake shoe, adhesive, and lining in a retaining ring. The one shown employs a torque wrench to insure adequate clamping force.



When it is necessary to renew a bonded lining a pneumatic chisel is required to remove the thin film of old lining.





The retaining ring assemblies are put in an electric oven to process the bond.

can be cemented or bonded to conventional rivet type shoes, if desired.

The development of plastic adhesives for war use led naturally to the development of the new process, which employs a resinoid plastic between the lining and the shoe. The application of heat and pressure turns the plastic into a solid binder that holds the lining to the shoe so firmly that an air chisel is required to remove it.

The method of applying the plastic to the shoe differs with the companies marketing the systems. One company sells the

(*Continued on page* 76)

Pop Helps Larry get his



MOTOR AGE
BASIC COURSE FOR
MECHANICAL TRAINING

Larry was up in the clouds over his solution to this

POP O'NEILL switched on the headlights of the coupé at the Glenrock borough line.

"If I'd 'a' known it was gonna take us so long," he said to Tommy Winters, who sat beside him, "I'd 'a' let that tractor job go till tomorrow."

"I never expected to have to work on a farm," said Tommy.

"Well, I wouldn't 've done it for nobody else," said Pop. "But Harvey Loomis and me was raised on neighborin' farms. He was in a spot, with all the implement dealers jammed up, so I thought I oughta run out and give him a hand."

"It was fun," said Tommy, "but we wasted an awful lot of time shooing chickens out of our way so we could work."

"I didn't mind them so much. It was that calf that got me. Every time it seen the loose end of a radiator hose, it thought it was dinner time."

He consulted his watch.

"I oughta stop by the shop for a few minutes," he said. "Gotta get some checks out. If you can wait, I'll drive you on home."

"I'm not in a hurry," said Tommy.

As they turned into the street on which the shop was located, Pop leaned forward. "Say, what's goin' on down there?" he asked.

"Somebody must have left the lights on."

"There wasn't nobody in the office to leave them on at five o'clock. But, if anybody did, I'll bet it was Larry."

He eased the coupé up to the curb and hopped out, with Tommy running around the front of the car to join him. Together, they peered through the glass of the office door.

"Well, if that don't make the cake fall!" exclaimed Pop. "Larry sittin' there studyin' a book."

"Probably a tough job came in after we left," said Tommy.

"Larry wouldn't stick around five minutes for that!"

"Then what *could* it be?"

Pop wagged his white-fringed head. "I can't figure it a tall," he said.

"Maybe—" began Tommy.

Pop swung around abruptly. "There ain't no maybes about it," he said. "We gotta get a doctor. That man's sick."

"He's getting up," said Tommy.

As Pop looked around, Larry closed a thick instruction book, put it back on the shelf behind the desk and sauntered out into the shop. Light's flashed on to light his progress.

"I never thought I'd be keepin' a fish market," said Pop, "but there's somethin' fishy goin' on around here. We gotta see this."

He let Tommy and himself into the office and tiptoed to the door leading to the shop.

"He's got a racing car out there," whispered Tommy.

"It's one of them jobs that's been practicin' out at the Fair Grounds," said Pop. "Now what can that nut buster be doin' with a race car?"

"We could go ask him."

"I guess we could," agreed Pop. He led the way out into the shop.

At the sound of their footsteps, Larry pulled his head from behind the dash of the car and looked at

Bearings



"Then as he saw that Pop didn't seem to be angry, his features relaxed and his lips resumed their usual contemptuous curve."

souped up stock car's bearing problem until Pop stole the silver lining

by **J. EDWARD FORD**

them with the startled expression of a boy caught on the bank of a forbidden swimming hole without his trunks. Then, as he saw that Pop did not seem to be angry, his features relaxed and his lips resumed their usual contemptuous curve.

"Okay, Pop," he said, "I'll pay for the lights. Or maybe you're gonna charge me rent."

"Wouldn't think of it," said Pop. "It's worth that much just to see you in the shop after quittin' time. But," he added, jerking a thumb toward the race car, "when did we start fixin' souped-up stock cars."

"Well," said Larry, reluctantly, "this ain't exactly *our* job; it's mine. I told Leadfoot Sweeney I'd try to get the work done after hours."

"Oh," said Pop, scratching the white stubble at the point of his jaw, "you're runnin' a little repair business on the side."

"Now don't get me wrong, Pop," said Larry. "I ain't gettin' paid a cent. I put a coupla bucks into this crate and I want to see Leadfoot get the checkered flag Saturday."

Pop looked over the racing car critically. "How are you figurin' on helpin' him?" he asked.

"He's been havin' bearing trouble," said Larry. "I'm gonna slip in a set of silver bearings."

"Pure silver?" asked Tommy in surprise.

"That's what I said," replied Larry.

"Well, if you do," said Pop, "you can kiss that dough of yours good-by."

Larry hitched up his coveralls and grinned crookedly. "I ain't workin' for you right at the minute," he said. "I can do what I like on *this* job. And I happen to want silver bearings because I just read in the book where silver is the strongest and longest-wearin' bearing material you can get. You ain't gonna argue with the instruction book, are you?"

"No," said Pop slowly, "but, if you want your pal

(*Continued on page* 84)



This is the business that O. R. Harrod saved from what seemed to be certain ruin just a few years ago.

Buick Dealer Builds a Better Business

Harrod had faith in his business and the ability to change with the times

By L. H. HOUCK

IN a time of shortages Frankfort Buick Co., Frankfort, Ky., increased their profits six times over their pre-war volume. This six-time increase was gained despite the loss of what was formerly the most profitable part of the business—new car delivery and accessory sales to new car owners. O. R. Harrod, owner of the company, declares that these results came about because of a shift over to departmental organization and incentive pay for the department managers.



O. R. Harrod

Attention to service and detail plus a manager on incentive pay shot service station volume up more than 25 per cent as a whole and raised the volume of the lubrication department of the service station operation nearly 40 per cent. But these increases in the service station department are not nearly so important as the sales attitudes and aims of the manager and attendants who are definitely interested in selling all customers more than gasoline and oil—they watch for prospects for seat covers, new engines, new cars, overhaul jobs, front-end alignment jobs, new paint jobs, tune-ups and the constant promotion of accessories such as heaters, radios, fog lamps, batteries, horns and defrosters. They merchandise the smaller items themselves and take the prospects for overhauls, tune-ups and paint jobs to the head of the proper department. Each department manager participates in profits. The manager of the paint shop, for instance, promotes the business of other departments, tries to make the paint shop customer a regular customer of all the other departments of the Frankfort Buick Company.

Tire profits have more than doubled in the face of a shortage of tires. But the men learned how to sell tires during the period of rationing and recapping. O. R. Harrod, owner of the business, bought the city's only tire recapping plant before it got well started. When the owner was called into technical service for the government, Frankfort Buick bought the plant and moved it into the new car display room of their new building just before the war started. It remains a profitable department.

Another phase of the incentive angle for department managers, as outlined by Harrod is that each department manager helps buy the merchandise that he sells. Since it is to each manager's direct financial gain to have merchandise to sell, periods of shortages found these managers combing the countryside for merchandise—and getting it because they searched dili-

(*Continued on page* 78)

by ED HEVNER

Selling Power



Let's Get Down to Business

We've been living in dreamland a long time but the big spree is over and many of us are in for a rude awakening

A REPAIR shop in my neighborhood proudly displays a dusty sign in the office. It reads, "Don't go away mad, just go away."

It's the hangover from the war period. The boys have for so long been in a seller's market that they haven't got hep to the fact that a buyer's market is on its way, if not already here.

It may be human nature to take the line of least resistance, but that line leads to fewer and fewer sales. It is understandable that there is a carryover of indifference from the time when the shops called the tune, but all things end, and the end of the shopman's paradise is just ahead.

It won't take the car makers long, barring labor trouble and a steel shortage, to produce several million cars and many more per year. As these new cars hit the road, the old ones will be scrapped. New cars don't need many repairs for some time. Where will be the flood tide of repair work then? What will take the place of desperate drivers humbly accepting appointments for weeks in advance?

In their stead will be car owner repair work shoppers. They will want first-class service and they will go where they can get it. They will scrutinize estimates and final charges. They will remember the tossing around they received in the boom days, and be critical of service.

If the men in your shop haven't figured this out for themselves, do them and yourself a favor. Tell them the score. Times are still good. There is plenty of repair work coming in but shopping has begun. Buyers are becoming more critical.

It may be too late to change, or to change fast enough, if you play the string out right to the end. Now, when there is still a great volume of repair work, is the time to revamp your thinking, reorganize your actions, and rekindle the spark of enthusiasm, interest, and courtesy to customers. Later on, it may be too late.

For when the chips are really down, and competition is king again, you will have to compete with those shops which got ready in time for the days ahead, and with those which did not need to get ready because they had never slumped in their service.

And get ready for sensible prices, too. The other day I had my car washed at the shop that got all my business. I asked them to put on my license plates. They charged me fifty cents for putting them on. It wasn't the half-buck that I minded so much as the attitude. Because the boys were hoggish when they could have done me a favor, I took my business elsewhere.

If you think I was unreasonable, then you're in for a bad time increasingly from now on. The public is tired of being played for a sucker. We want some recognition of our value to you as customers. We want some courtesy, maybe a little favor or two, just for the hell of it, and we even want a little deference.

Be smart and be yourself again. You were a pretty nice bunch of boys until the big money went to your heads. We'll forgive you, but you'll have to change over fast. You can do it and you'll like yourself, your business, and your customers better, when you do.

Servicing

Carter Carburetors

INSTRUCTIONS released by the Carter Carburetor Corp. covering the servicing of the Carter model WCD downdraft carburetor No. 608S as used on the 1946-47 models 40 and 50 Buick, and No. 609S as used on 1946-47 Buick models 60 and 70, are as follows:

Float Adjustments:—Two separate float adjustments must be made—lateral and vertical.

Lateral Adjustment:—With bowl cover assembly inverted, bowl cover gasket removed, and float lip resting on seated needle, place float gauge T109-162 directly under float with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge. Adjustment should be made by bending arm of float.

Vertical Adjustment:—With float gauge in position mentioned above, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting should be 3/16 inch. Adjustment can be made by bending arm of float. Carefully remove float, install bowl cover gasket and then reinstall float.

A fast check of the fuel level can be made on the car by removing the inspection hole plug in the side of carburetor body. Fuel level should be even with the bottom of the hole—with engine idling.

Pump Adjustment:—(Fig. 1). The accelerating pump has been designed to produce a uniform pump action. The total distance the plunger (not shaft) moves from closed to wide open throttle, controls the amount of fuel discharged. Correct pump plunger travel is important and should be checked each time the carburetor is disassembled. Procedure is is follows: With pump connector link in place, back out throttle lever set screw to allow throttle valves to seat in bores of carburetor. Support carburetor so throttle can be opened without throttle levers dragging on bench top (wooden block will suffice). Place pump travel gauge T109-1175 (E) inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until finger just touches upper end of plunger shaft. Read figure on gauge at notch in knurled nut.

Open throttle slowly until plunger bottoms in pump cylinder (at approximately half throttle). This can be

(*Continued on page* 90)

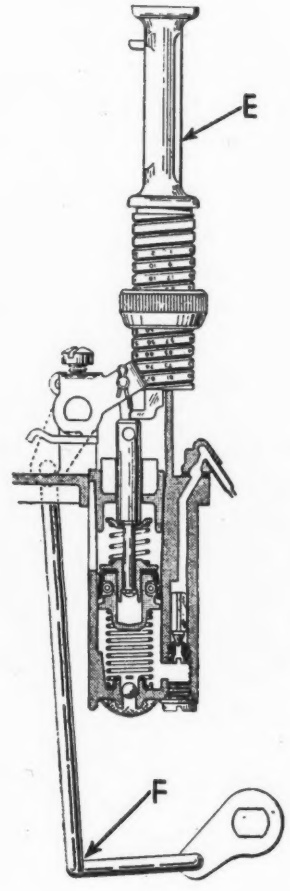


Figure 1

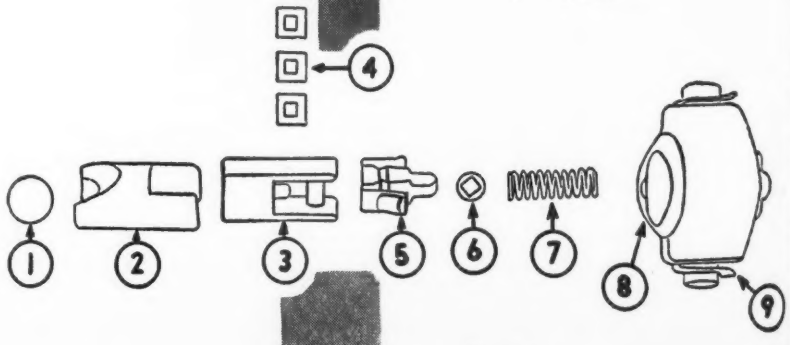


Figure 6

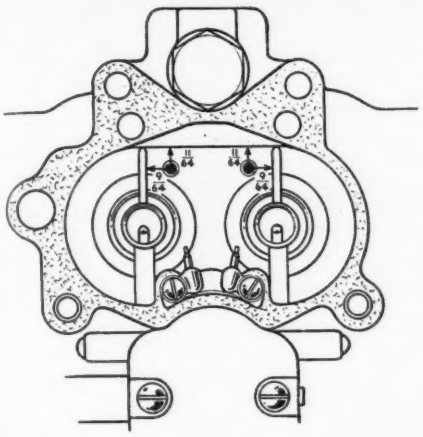


Figure 2

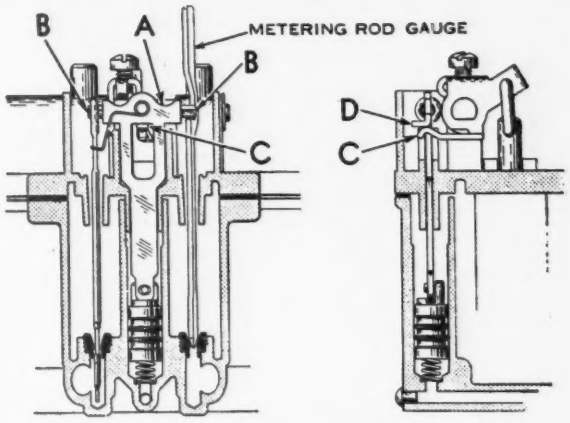


Figure 3

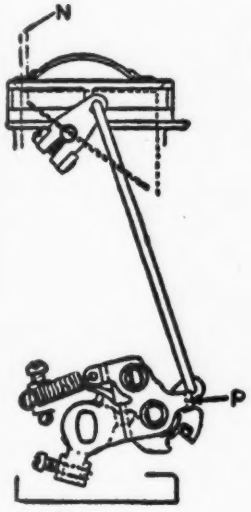


Figure 4

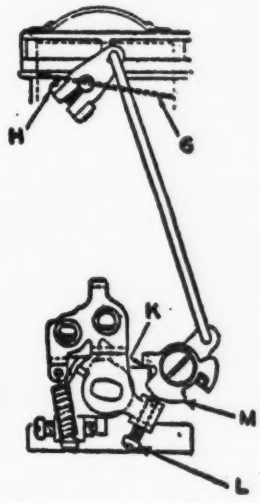


Figure 5

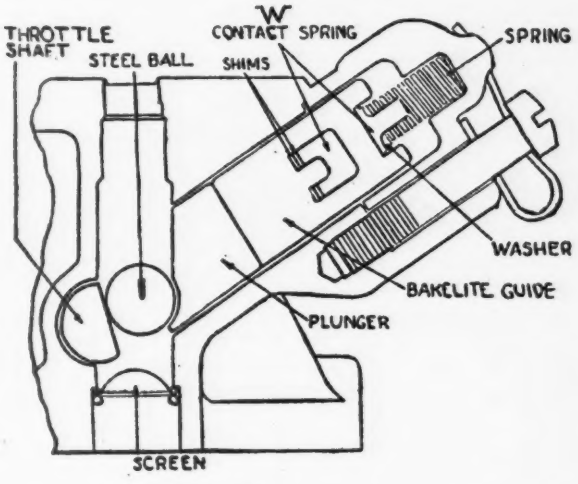


Figure 7

Fig. 1. Accelerator pump plunger adjustment.
Fig. 2. Accelerator pump jet adjustment.
Fig. 3. Metering rod adjustment.
Fig. 4. Automatic choke adjustment.
Fig. 5. Fast idle adjustment.
Fig. 6. Carter Car Starter exploded.
Fig. 7. Cutaway view of Carter Car Starter.
Fig. 8. Throttle valve opening gage.

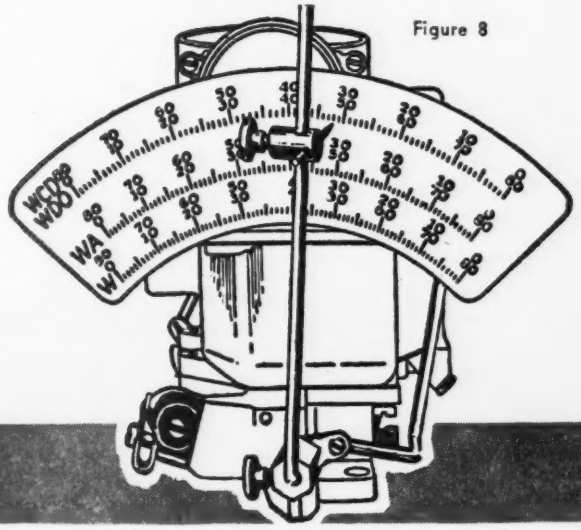
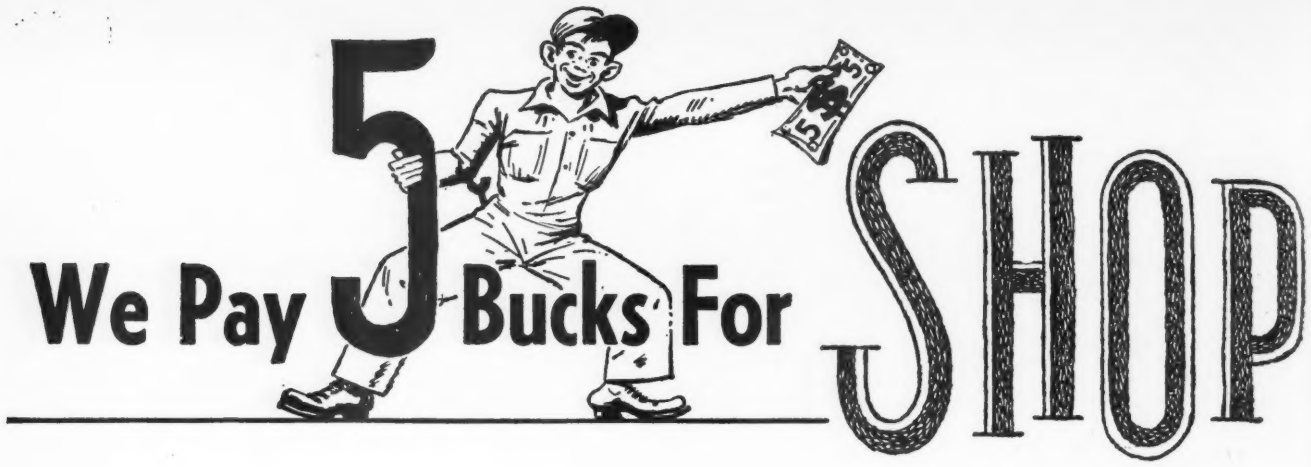


Figure 8

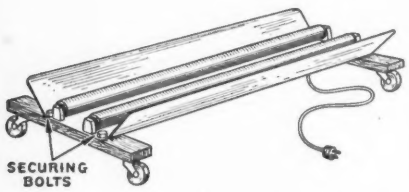


Surer than the races, steadier than hitting the jackpot. The faster you write 'em, the richer you get. We need 'em bad if they're good. So grab your pencil and spike yourself a fin. Send along your idea—write it or draw it, anyway that we can understand it—some short cut to make a job easier or faster, some special tool you can't buy, some kink of your own. Of course, we won't accept any printed by any other publication.

Fluorescent Work Light

It's not easy to get a good, broad source of light to use under cars. Our idea seems to have solved the problem OK and now we wouldn't be without it.

We took a medium sized flouresscent light unit and drilled it as shown in the sketch. We then mounted it on two cross boards to increase the width. To these boards we attached four rubber-tired flange-type casters on legs long



enough to clear the ballast coil box. A piece of heavy screening was bent to fit the reflector and slipped over it, to protect the tubes from falling tools. Bending the screening in place is sufficient attachment, as it must be removable for cleaning.—*Pennsylvania Subscriber.*

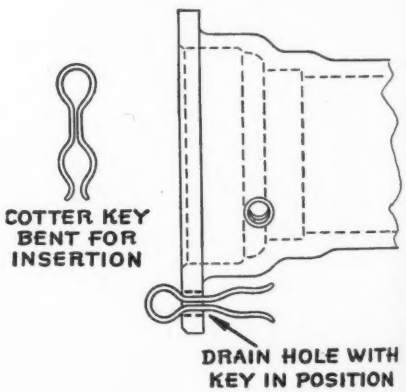
Fixing a Front Brake On Current Chryslers

If you get a squeak in the front brakes on a current Chrysler and can't locate it readily, the trouble is more than likely the bottom brake shoe spring rubbing the brake anchor plate.

To cure this squeak place a 3/16 in. plain washer on one end of the brake spring and hook the spring in the hole in the brake shoe, being careful to keep the washer over the hole while making the hook-up.—*Joe Broadway, 4021 So. Orphanage Rd., Tucson, Arizona.*

Rear Axle Grease Leaks On Studebaker Champions

Grease leaks at the outer rear axle bearings on Studebaker Champions some times persist even when both outer and inner seals are installed and axle and clearance has



been adjusted properly. The outer grease retainer on this car is constructed so as to connect up with a hole in the brake backing plate. This hole clogs up with dirt, preventing escape of the grease.

To remedy this, clean out the hole. Then insert a 3/16 by 1½ in. cotter key shaped as in the drawing into the grease hole. Pinching the middle together will force the ends apart and prevent the key from falling out. Road action will cause the key to wriggle around, keeping the grease hole open.—*H. W. Doebel, Hanlontown, Iowa.*

KINKS

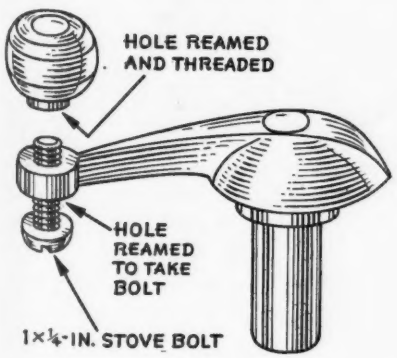
Clearing Chevrolet Oil Pan Lines

When I find the oil pan lines on a Chevrolet badly clogged, I use the following method.

Without removing the lines from the pan, heat them with a torch, starting at the forward end and working toward the rear. Heat the lines until the sludge and carbon begin to smoke, being careful not to get them hot enough to melt the solder. While the line is hot, blow it out with compressed air. The heat loosens the carbon and sludge and the air blows it free of the line.—*Francis A. Oglesbee, 1921 Avondale St., Waco, Texas.*

Ford Regulator Handles

We have encountered quite a bit of difficulty with window regulator



handles coming off, especially on 1946 Fords, and have seen many unsuccessful attempts to repair them with cement, tape, paper and so forth.

We have succeeded in anchoring them, however, by removing the handle and reaming and threading the hole for a 1 in. by ¼ in. stove bolt. The knob should be held within a pad to avoid damaging it and not screwed up too tight.—*C. B. Robertson, c/o Oliver-Lilly Motors Co., Grenada, Miss.*

To Keep Corks Free

I've found that once bottles of shellac, cement, liquid gasket and so forth that use cork or wooden stoppers have been opened, the stoppers stick and break. Now I coat the stoppers with a light layer of water pump grease before replacing them and they remain free and easy to use.—*A. D. "Huck" Stuehm, Fisher, Illinois.*

Installing Buick Chain

I have found that, when removing and installing the timing chain on a '37, '38, '39 or '40 Buick it is not necessary to remove the entire front end.

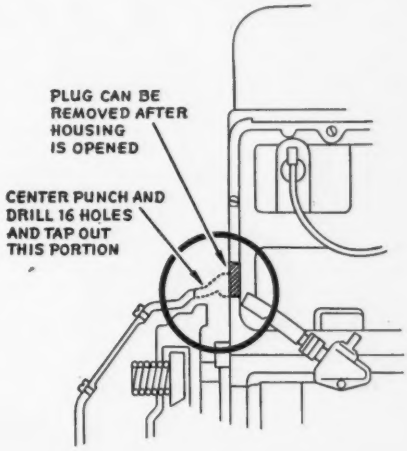
Instead, I remove one side of the grille, and working through the opening, unbolt the radiator and remove it through the hood. I can then get at the timing chain cover and remove and replace the chain itself. This method saves a great deal of time and effort.—*Richard A. Weise, 4683 Griscom St., Phila.*

Replacing Expansion Plug on 1937-'39 Chevrolet

Here is a simple method for removing and replacing the rear expansion plug from Chevrolet blocks, 1937 through 1942. These plugs occasionally rust out and leak water down through the clutch housing.

First center punch as shown in the drawing and drill about 16 3/16 or ¼ in. holes, back 2 in. from the block on top of the housing. Remove the small piece of housing by tapping lightly. With this small piece removed you can very easily remove and replace the rusted out plug.

It is not really necessary to cover the hole in the housing, but it can be done by making a thin steel cover and attaching it with two ¼ in. cap screws. We have been

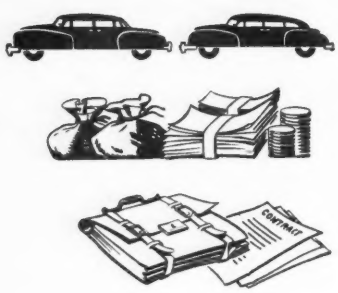


doing this job in one hour's time, where previously it took 5 to 6 hours to remove the transmission, clutch, flywheel and housing. It has always been completely successful. —*Eddie Willis, Moots Motors, 302 N. Center St., Clinton, Ill.*

Truing Up a Punch

When I break or batter up a punch so that it is no longer serviceable, I true it up by putting the driving end in an electric drill and holding it against a grinding wheel with both drill and wheel turned on. Any size or taper can be made in this way.—*Robert Brucker, Pleasant Street, Wakeman, Ohio.*

The Big 3 for Small Shops . .



Production
Finance
Salesmanship

If the owner of the small repair shop doesn't know his onions in all three of these essential fields, he's sure to end up with tears in his eyes

by ***CHARLES M. KENYON***

MOST failures among small repair shops result not from lack of mechanical skill on the part of the owner, but from lack of skill in running the business. In addition to knowing how to repair cars, the shop owner must know how to attract new customers, how to set profit-making competitive prices, how to handle money so that it makes more money, how to foresee future developments in his trade, and he must be able to tell each day whether he is making a profit or eating his own assets. The lack of ability to keep simple books, for example, accounted for more failures in past years than any other single factor.

Often the owner is a first class mechanic, but he doesn't realize that his business success depends not only upon the mechanical work he turns out but also upon how often he completes jobs and at what profit per job. He cannot overlook the small savings which come from shrewd buying, the small cash discounts for prompt payment of bills, the small savings from knowing all possible tax reductions, the labor saving from planning his men's work in advance to reduce time lost between jobs, the saving from servicing his equipment so that it is not tied up for major work—with the double loss of a mechanic's time and of the use of the machine itself. "Penny ante stuff," sneers th boom wealthy small-timer, but the old hand at the game adds pennies like these into a sizable pot. Keeping an eye on the business is a bigger job than listening to a tuned up engine sing.

The owner of the small repair shop has at least two of the major problems of big business management licked. He is himself an expert technical man who knows the actual production side of his business cold, and, second, he works so closely with his men that "labor relations" is only something mentioned on the newspaper editorial page. On rainy Monday afternoons the boys obviously aren't one big happy family, but the owner is part of the problem and can deal with it first hand. He does not have to learn about it from the written report of the personnel department.

The greatest weakness of actual management in the small shop is that a lack of adequate planning wastes valuable labor time. For example, a shop owner keeps a good man tied up with an overall job on Friday at the height of the summer tune-up business with quick money high profit tune-ups going by the door. Then Tuesday afternoon comes around. The overhaul is completed, the week-end flurry has passed, and the mechanic has a free ride for the day.

Another great loss to the small shop is through time wasted in hunting for tools, cleaning equipment while jobs wait, and in general doing shop maintenance when the time could be spent on cash money work. There will always be slack time at odd hours for company work.

Because of the skill of American mechanics, most shops make money in spite of these weaknesses. But better planning would result in more profit and easier working conditions.

One good source of help for shop owners on technical problems and suggestions for more efficient shop layout are the manufacturers and suppliers of tools and equipment. These men have the technical knowledge to lick many problems beyond the scope of the small shop and many of the manufacturers have research departments constantly turning up better ways to whip difficult jobs. Trade journals like MOTOR AGE serve as good clearing houses which pass on technical knowledge from factory to shop mechanic and exchange the knowledge gained through experience by other working mechanics. But the problem which arises in the shop itself are relatively familiar to all shop owners. The problems of shop finance often are not.

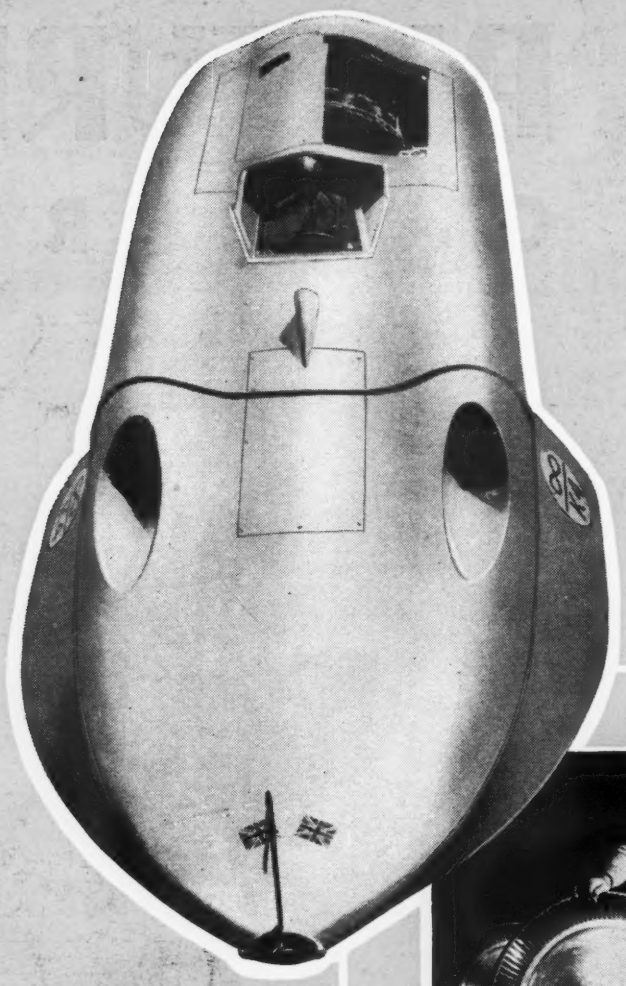
How to borrow money wisely is not something which

(*Continued on page* 96)

MOTOR AGE PICTURE GALLERY

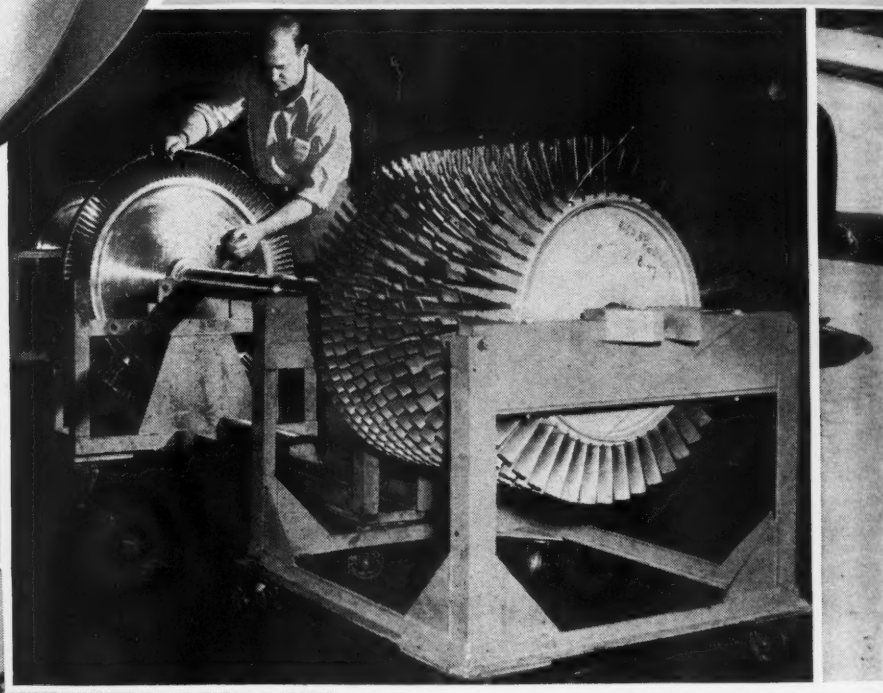


Linda Christian, nicknamed "Firetop" by Metro-Goldwyn-Mayer, is rated one of the year's most promising red-heads.



◀ Sir Malcolm Campbell with the first jet-propelled speed boat in history will try to set a new world record on Lake Coniston, England. Sir Malcolm, who holds the present mark of 141.7 mph wears special sound deadeners during warm-up of the DeHaviland "Goblin" jet engine.

Until recently rated "top secret," this mechanism is the heart of the jet engine which delivers 4,000 hp in the Army Air Forces P-80s. The blower is at left and the stator at right. Each of the 1,800 blades in the stator must pass rigid tests before it is incorporated in the final assembly. ▼





◀ Vittorio Isacco demonstrates his telescopic rotating wing which is now being tested in England. The device may replace the parachute as the passenger, seated below the revolving wing, can regulate the speed and the direction of his descent by moving a single lever. A further development permits a complete cabin full of passengers to be dropped from a plane.



Clinton C. Shepherd of Opportunity, Wash., a retired garage owner, shows the world's record rainbow trout, a 36 pounder, which he caught in Lake Pend Oreille on the opening day of the 1947 season. Incidentally the dethroned champ, Laurence Hamilton of Reardon, Wash., is also a garage owner.



(Right center.) The "hoppicopter" will carry a 250 pound load at 90 mph up to 12,000 feet according to its inventor, Horace Pentecost, Seattle engineer. The flying suit demonstrated is not recommended for the higher altitudes.



The little "Airscoot," scarcely larger than a suitcase itself, carries two pieces of luggage and two passengers. When the front wheels are not in use they fold in at the sides.



Now you can take the train and your auto too, on the Chesapeake and Ohio Railroad. The "train-auto ferry service" enables train passengers to take their automobiles in an extra car which has room for four standard sedans.


FRANK
THE FIXER
STORY BY J.E.FORD
DRAWN BY A.L.CASSEL
SORRY, CHUM, WE CAN'T HELP YOU OUT WITH YOUR BUSTED-DOWN TRUCK-TOO BUSY
OKAY, BUT YOU LUGS IS GONNA BE SORRY
THAT'S THE FIRST TIME I EVER HEARD YOU TURN DOWN A JOB.
ME, TOO
DON'T YOU REMEMBER WHO THAT IS. IT'S LOUIE THE LOUSE, ONE OF THE HAM'S TRIGGER MEN.
HE DIDN'T LOOK TOUGH TO ME. I'LL BET I COULD FOOL THEM.
YOU STAY AS FAR AWAY FROM GUYS LIKE THAT AS YOU CAN. EVEN THE COPS DON'T LIKE TO TANGLE WITH THEM
FRANK AND WHITEY
YOU'LL GET IN TROUBLE IF--- SAY, ARE YOU MAKING YOURSELF INVISIBLE AGAIN, HAP?
HE'S REALLY GONE THIS TIME. HE DOESN'T ANSWER
THREE HOURS LATER
HEARD ANYTHING FROM HAP, YET?
NOT A WORD!
SAY, I'M WORRIED ABOUT THAT GUY. I THINK WE OUGHT TO TELL THE POLICE
MEANWHILE
I OUGHT'A GIVE YOU A GOOD GOIN' OVER. I TOLD YOU I WANTED TO FINISH THEM GUYS OFF TODAY.
LET TILLIE CALL 'EM ON THE PHONE. THEY ALWAYS GO FOR A DAME.
POLICE HEADQUARTERS? WELL, DO YOU WANT TO PICK UP THAT CRUMB THE HAM AND HIS PANTY-WAIST MOBSTERS? YES? YOU'LL FIND THEM AT 210 MAIN, SECOND FLOOR BACK.
HEY, WHO SAID THAT?
NOT ME!
AW, WE'RE HEARIN' THINGS.
YEAH, BUT THE POLICE HEARD IT, TOO. THE PHONE WAS OFF THE HOOK. I'M LEAVIN'.
SAY, SOME DIRTY RAT TRIPPED ME!
YOU'RE NUTS, BOSS NOBODY DONE NOTHIN'.
THE JOINT'S HAUNTED!
DOWN THE BACK STAIRS.
TOO LATE, BOSS. LOOK!
WHAT DO YOU CALL THIS? WE'VE BEEN LOOKING ALL OVER TOWN FOR YOU
DON'T YOU KNOW ANY REAL TOUGH CHARACTERS? THE HAM WAS TOO EASY. I LIKE EXCITEMENT

GMC Gas and Diesel Models

GENERAL MOTORS' Truck and Coach Division's new line features both gasoline and Diesel operated models. Both types show major changes in cab and body design, although the basic mechanical units remain relatively unchanged except in the field of lubrication and cooling.

The gasoline trucks, to which an additional line of cab-over-engine units will shortly be added, employ the three standard GMC valve-in-head powerplants, modified to suit their new application. These are the 228, 248 and 270, a larger displacement engine replacing the previous powerplant on some of the models.



Note new radiator grille and hood lines on this new GMC truck

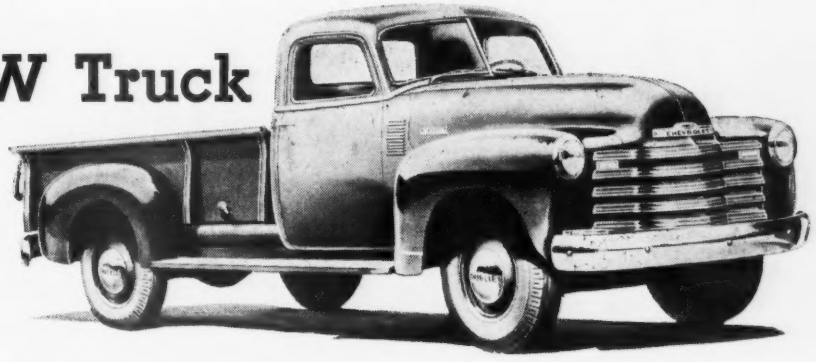
Most of the models have longer springs, wider track, greater gross vehicle weight, heavier, more rigid frames and improved cooling systems. The radiators are fitted with overflow tanks built into the top, while pressurized systems are standard or optional on all models.

In the powerplants, such modifications as two-piece exhaust valve inserts, positive crankcase ventilation, coolant by-pass and deep-sump oil pans have been incorporated.

(*Continued on page* 112)

CHEVROLET

Announces NEW Truck



Improved dependability and reduced operating costs are claimed for the new Chevrolet truck models.

BILLED as "Advance-Design" trucks, the new Chevrolet commercial line consists of the Thriftmaster (Series 3100, 3600, 3800) and the Loadmaster (Series 4000, 5000, 6000) models. As described in the specifications, the utility of the heavy duty trucks has been widened by an increase in maximum gross vehicle weight rating. For example, the ratings of Series 6100S and 6400S (1½-ton specials) have been increased from 14,000 pounds to 15,000 pounds.

The bodywork is noticeably different from preceding models, although the basic mechanical units are essentially the same.

The two familiar Chevrolet valve-in-head engines power this line—the standard 216 cu. in. engine being used in the Series 3000 and 4000, while the heavy-duty 235 cu. in. engine is standard in Series 5000 and 6000. Several detail changes have been made in these engines, however.

For one thing, the oil control rings are now of wide slot design to lessen carbon plugging. The water pump has a double-row ball bearing mounting for the shaft. permanently lubricated and sealed with an asbestos and Bakelite seal claimed to give the unit longer life. To improve the cooling of these power plants, the cooling system capacities have been increased from 14 to 15 quarts on the light duty models and from 16 to 17½ quarts on the heavy-duty models.

Three-speed syncromesh transmissions are used in the Series 3100 and 3600, the other models are

(*Continued on page* 112)

SALES The MOTOR

MEWA at Annual Meeting Elects Meyer President

The annual meeting of the Board of Directors of Motor and Equipment Wholesalers Association the election of officers for the new year was held and newly elected directors to succeed retiring Board members were announced.

Frank K. Meyer, of Jos. F. Meyer Co. of Houston, Texas, Vice-President of the association for the past year succeeded Franklin P. Gaul as President. Erle A. Henderson, of Henderson Brothers, Sacramento, California succeeds Mr. Meyer as Vice-President. Clifton E. Hamlin, C. E. Hamlin Co., Jackson, Michigan, succeeds Carl L. Johnson, of Johnson Brothers Auto Supply Co., Wichita, Kansas as Secretary. Howard S. Walters, of Walters Distributing Co., Inc., Mineola, L. I., N. Y., succeeds Joseph F. Sirotek, Illinois Auto Electric Co., Chicago, as Treasurer.

The following men were elected to the M.E.W.A. Board for a term of three years to succeed retiring Directors. William D. Bacon, The

(*Continued on page* 128)

Industry Studies Effect Of Taft-Hartley Labor Law

Industrial relations directors in the automotive industry so far have been very guarded in the comments on the new Taft-Hartley labor bill. The general opinion seems to be that it is too early to tell how the various provisions of the act will affect labor relations in the automotive industry and that a number of test cases will have to be tried in the courts before a determination will be possible. Actually, most observers believe that with most contracts already signed in the automotive industry and running for at least a year there will be very little reason to exercise new privileges under the law until sometime in 1948.

The closed shop does not exist in the automotive industry so that is of no particular importance.

(*Continued on page* 130)

Thermoid Acquires Interest In Asbestos Mfg. Co.

Coincident with plans for expansion to enable The Asbestos Manufacturing Co., Huntington, Indiana, to sell a complete line of asbestos and rubber products in the automotive replacement field, Neville, C. Foss, Amco president, has revealed the sale of 25 per cent of its common stock to Thermoid Company of Trenton, New Jersey. A major manufacturer in both the automotive rubber and asbestos markets, Thermoid's interest is expected to improve Amco's stability and business potential.

In a statement released by Mr. Foss, he said that his company had long recognized the disadvantages from a balanced merchandising standpoint of producing only for original equipment manufacturers. The additional capital, production

(*Continued on page* 130)

Chevrolet Raises Prices On New Truck Models

Chevrolet has advanced prices along with the design of its new line of "advanced design" trucks. The increases vary from $26 on light delivery models to $162 on a heavy duty model equipped with an optional body. The company gave no reason for the price increase. There seems to be a tendency toward increased car prices all around.

J. C. Hurley Appointed To Aro Sales Post



J. C. Hurley

The appointment of J. C. (Tom) Hurley as Manager in charge of original equipment sales for The Aro Equipment Corporation, Bryan, Ohio, was announced by J. E. Allen, Vice-President of the corporation.

Mr. Hurley is well-known in the automotive and farm implement industries, having served these fields for 16 years in a technical and sales capacity covering all phases of lubricating equipment problems.

Lee Moran Resigns as NADA Executive

M. O. Anderson, President of NADA recently announced the resignation of Lee Moran, executive vice president. Mr. Moran will return to the sales and distribution field from which he was drafted by NADA in 1944 to perform im-

(*Continued on page* 126)

Holland Takes 100 Mile National at Langhorne

Indefatigable Bill Holland, his face caked with blood from an injured eye, captured his second 100-mile dirt track national championship of the 1947 season at Langhorne Speedway on June 22.

A record crowd of 52,000 roared an ovation as the Bridgeport, Conn., speedster finished the grind despite the hampering eye injury caused by a stone smashing his goggles.

Thirty-nine-year-old Holland, who finished second in the 500-mile

(*Continued on page* 124)

AGE NEWS SERVICE

JULY, 1947 a b c d

Ford Motor Company Wins Foremen's Strike As FAA Union Plans Fight on Taft-Hartley Bill

Perhaps one of the most significant gains for management in the Taft-Hartley Act is the provision that employers need not recognize foremen's unions. The status of such companies as Packard which was ordered by NLRB to bargain with its foremen is an open question at the moment. The company could ask for a court order releasing it from the NLRB obligation in view of the new law, but in such a case FAA may test the constitutionality of the Act. NLRB has been holding in abeyance action against Chrysler, Hudson, and Briggs and it is unlikely that anything further will be done in these cases in view of the provisions of the Taft-Hartley Act. FAA has about 15 contracts at present including Kaiser-Frazer Corporation.

Denial of bargaining right protection under the law cut the ground from under the Ford foremen who had been on strike since May 21. There had been a considerable back to work movement and the union was casting about desperately to salvage some kind of contract, but the company stood firm and has refused consistently to negotiate with the foremen's association. Finally, Ford severed its contractual relationship with FAA and the strike collapsed 47 days after it started.

There is no doubt that FAA has been greatly weakened by its defeat by Ford but it still is too early to rule the association out of the picture. The union officials say they will contest the Taft-Hartley Act in court and will continue their efforts to gain a contract from Ford within the plant. The executive board also approved a merger with either the CIO or the AFL although there has been no indication from either national union that it is interested in such an affiliation.

Previously Ford had stated that co-operation with the Foremen's Association of America had not been successful.

Past Presidents of AAC Honored

Specially engraved wrist watches were presented to the three past presidents of the Automotive Advertisers Council in a ceremony held at the conclusion of this organization's spring meeting in Hot Springs, Va., May 23. The three past officers so honored were: C. C. Tapscott, sales promotion manager, McQuay-Norris Mfg. Co.; Russ Case, now associated with the Chilton Co.; and T. F. Hall, sales promotion manager, Walker Mfg. Co. of Wisconsin. The presentations were made by Walter Kirkpatrick, manager of advertising and sales promotion, Wilkening Mfg. Co., newly elected president of the Council.

C. C. Tapscott was one of the founders of the Council and served from 1941 to 1943 as its first president. Russ Case, formerly with Thermoid Company, was the Council's second president, serving from 1934 to 1945. T. F. Hall served the Council as president during the past two years. The important part played by these three men in the building of the Council was emphasized by inscriptions on the watches presented to them.

Baldwin New Sales Manager for Speaker

The J. W. Speaker Corporation, Milwaukee 12, Wis., announces the recent appointment of A. R. Baldwin as sales manager. Mr. Baldwin has had eighteen years' merchandising experience in the automotive industry. He was formerly associated with A. Schrader's Son, Brooklyn, N. Y., as assistant manager of accessories sales.



A. R. Baldwin

Packard Convertible Priced At $2975, Detroit Delivery

Packard Motor Car Co. has announced that the suggested retail price of its first 1948 model, the super-8 convertible, has been set at $2975 delivered in Detroit, exclusive of state sales taxes. Geo. T. Christopher, president, pointed out that the company could sell all of the cars it can make at a substantially higher price but that the price tag has been set in conformity with the company's policy of building quality automobiles at the fairest possible cost to the customer. He said that Packard spent about $1.5 million on engineering and tooling for the new model.

Adjusting Delco-Remy Regulators

Is easy when you know the procedure recommended in the current article of the Motor Age series of the electrical systems of automobiles

by W. H. CROUSE

IN A previous issue of MOTOR AGE, we discussed the various quick checks to be made on the generator-regulator system (so that the cause of the trouble can be located) when some irregularity is detected. If the trouble is in the regulator, it may require complete checking and adjustment. The procedure for servicing Delco-Remy current and voltage regulators follows:

1. Mechanical checks and adjustments (air gap, point opening) must be made with the battery disconnected and the regulator preferably off the vehicle.

CAUTION: Never close the cutout relay contact points by hand with the battery connected since this would cause a high current to flow through the units which might severely damage them.

2. Electrical checks and adjustments may be made either off or on the vehicle. The regulator must always be operated with the type generator for which it is designed and constructed by its manufacturer.

3. The regulator must be mounted in the operating position, and it must be at operating temperature when electrical settings are checked.

4. After any tests or adjustments, the generator on the vehicle must be repolarized before the engine is started, as follows:

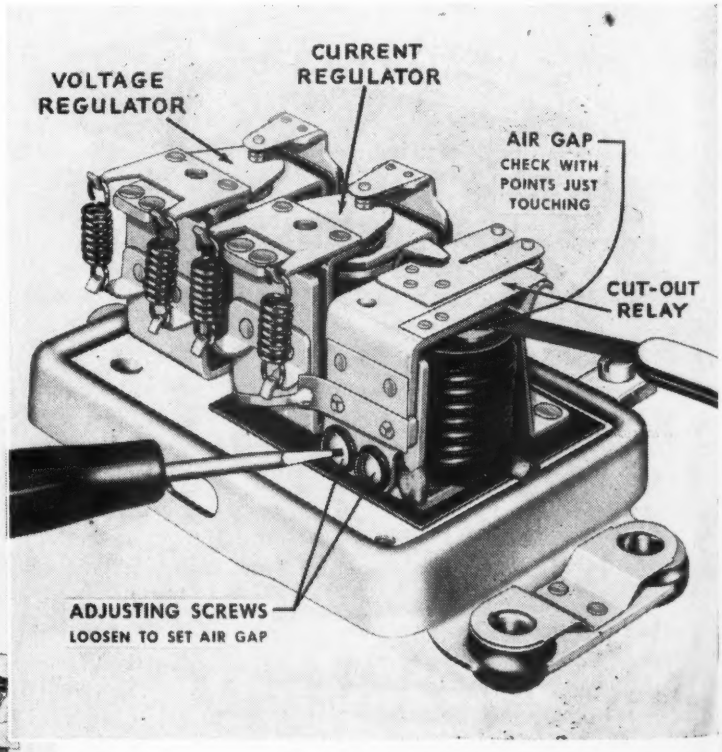


Fig. 1. Cutout relay air gap check and adjustment.

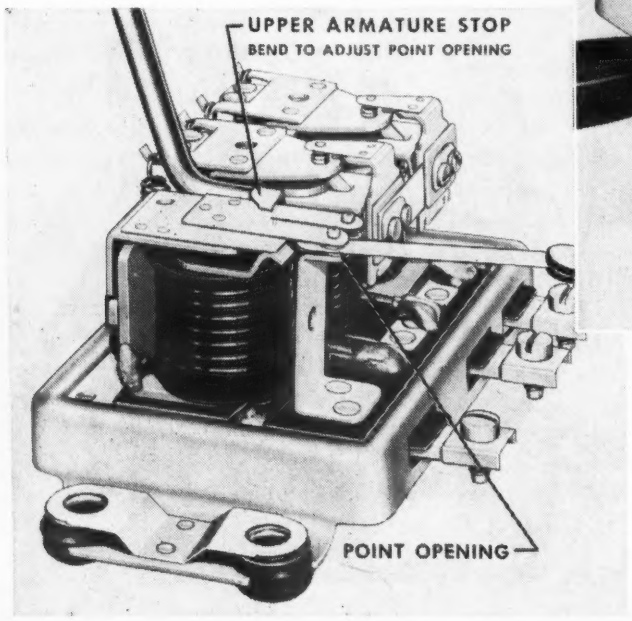


Fig. 2. Cutout relay point opening check and adjustment.

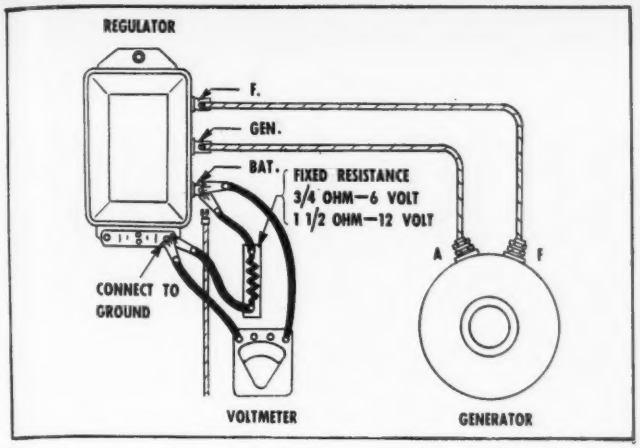


Fig. 3. Fixed resistance method of checking voltage regulator setting.

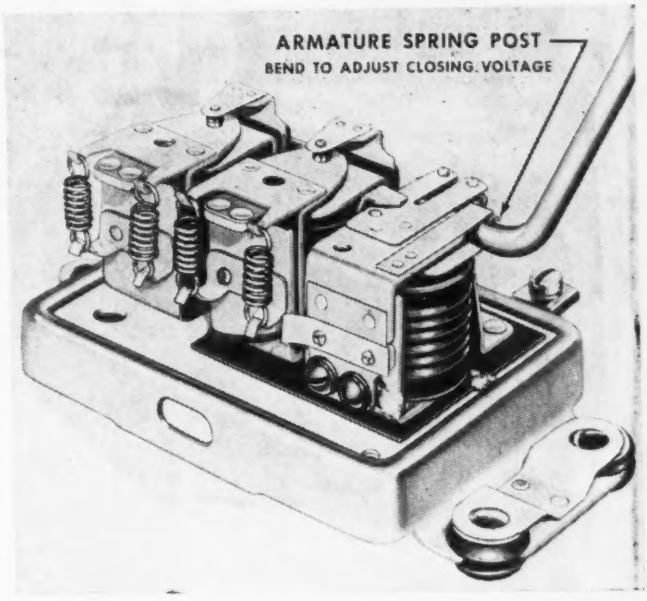
After reconnecting all leads, momentarily connect a jumper lead between the "GEN" and "BAT" terminals of the regulator. This allows a momentary surge of current to flow through the generator which correctly polarizes it. If this is not done, the generator may have reversed polarity which would cause vibration, arcing and burning of the relay contact points.

The cutout relay requires three checks and adjustments; air gap, point opening and closing voltage, and the checks must be made in that order. The air gap (Fig. 1) is checked with the points just touching and is adjusted by loosening the armature attaching screws so the armature can be raised or lowered as necessary. On multiple point relays, make sure that all points close simultaneously.

Closing voltage is checked by connecting a voltmeter between the "GEN" terminal and the regulator base and then slowly increasing generator speed until th relay points close. Adjust by bending the armature spring post (Fig. 4). This check should be made several times, with generator speed lowered to idle and then

(*Continued on page* 102)

Fig. 4. Cutout relay closing voltage adjustment.



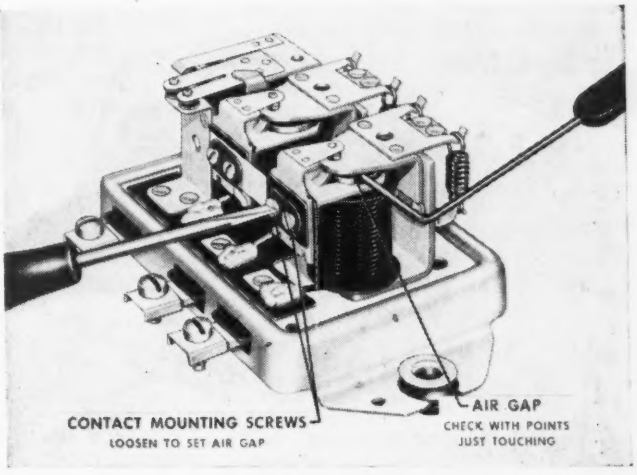


Fig. 5. Voltage regulator air gap check and adjustment. Current regulator air gap checked and adjusted in same manner.

Fig. 6. Voltage regulator adjustment. Current regulator adjusted in same manner.

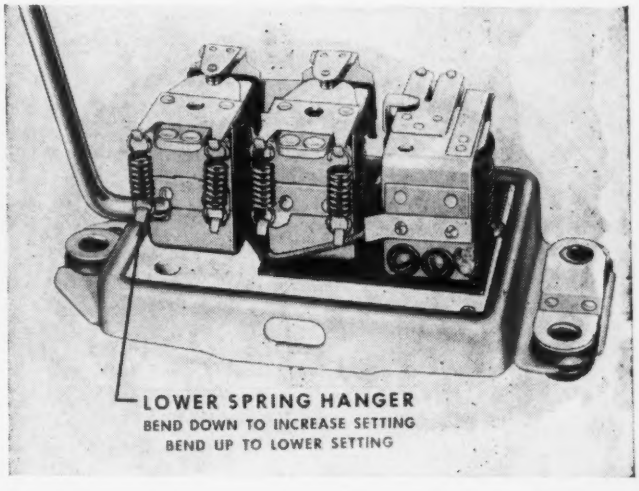
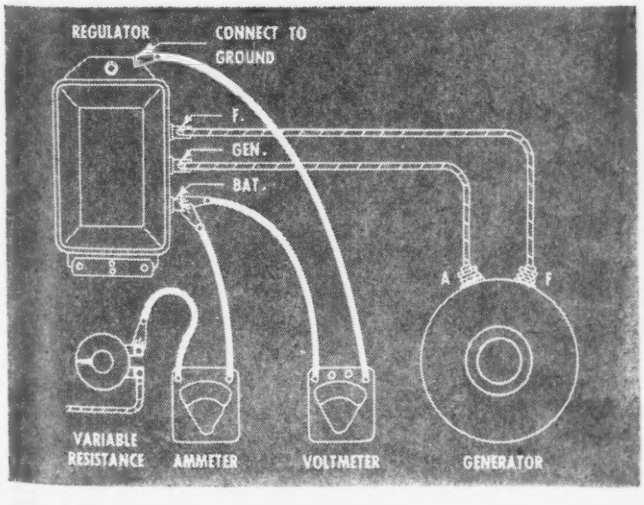


Fig. 7. Variable resistance method of checking voltage regulator setting.





CLEARING HOUSE

FOR SERVICEMEN'S QUERIES

Bill Toboldt, Editor, Motor Age

Vacuum Shift On Chevrolet Two Speed Axle

I would like to know if you have any information on the vacuum shift in a 1946-47 Chevrolet truck, 2-speed rear end and can it be replaced by a manual controlled unit? —John N. Mahoney, 765 Central St., Franklin, N. H.

INASMUCH as the vacumm shift control on the Chevrolet two-speed axle is virtually a built-in-unit, it is impossible to replace it and use a similar manual shift.

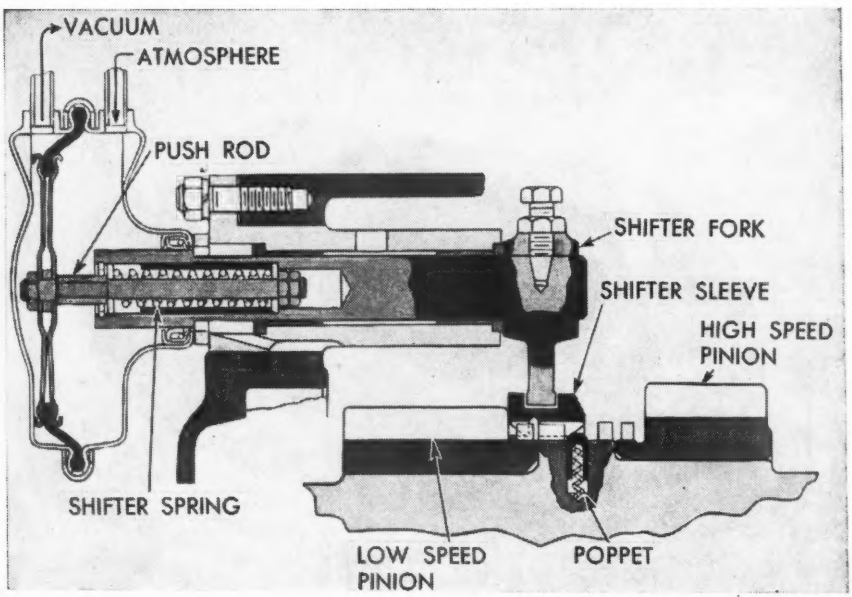
If you find that the vacuum shift control valve is hard to move or sticks, it is generally caused by the shaft being tight in the die cast cover of the valve body and in some cases the shaft has picked up metal from the die casting and froze the shaft. To correct the above conditions the Chevrolet factory recommends the following:

1. Disconnect the pipe fittings from the back of the valve body and speedometer adapter operating rod from the lever on end of valve shaft.

2. Remove valve operating lever from valve shaft by removing the cap nut and washer.

3. Remove the two screws that attach the valve assembly to the instrument panel and remove the valve.

4. Remove the cotter pin from the valve shaft.



5. With a soft hammer, carefully tap on the threaded end of vacuum valve shaft to drive it out of the vacuum valve.

6. It will be found that in most cases the seizing occurs adjacent to the washer brazed on the valve shaft. Remove excess metal from shaft with a file and then polish shaft with crocus cloth or fine emery cloth.

7. Lubricate the shaft lightly at the point of contact with the die casting using Gredag No. 213½ or similar graphite grease. NOTE—Do not use mineral oil as this will cause rapid deterioration of the rubber disc in the valve assembly.

8. Replace the shaft in valve assembly and install cotter pin.

9. Replace valve assembly on instrument panel, install valve control lever, connect pipe fittings and speedometer adapter.

The June issue of MOTOR AGE carried a complete servicing story on the Chevrolet 2-speed rear end. I suggest that you consult this story for more information.

Studebaker Oil Leaks

I overhauled a 1941 Studebaker Champion and before I overhauled it, it had a rear bearing oil leak. The bearing is O.K. I put two new wooden blocks in and it still leaks. I cleaned everything on the motor with no results in stopping the leak. What is the trouble?

Also I have a K-5 International

truck. It "jumps," misses from one plug to the other. What is the trouble? I put new rings and valves and gaskets in and checked the springs. Compression tests from 105 to 110 in all cylinders. The plugs get wet with what seems like raw gas. It worked like this before I did the work. I also had a truck that flutters at high speed. What causes this?

I have a 1937 Chevrolet that spits through the carburetor. What causes this? Everything checked, including points, valves, springs, float, cap.—Dan Kessler, Orwin, Pa.

IN regard to your 1941 Studebaker oil leak. It is not impossible that the leak is at the camshaft rear bearing rather than at the crankshaft bearing and I would suggest you check the welsh plug at the camshaft to make sure this is tight and not the source of your leak. I would also suggest you measure the crankshaft main bearing journal to make sure it is not out of round.

I suggest you make an oil leak test on this engine so as to be absolutely sure just where the leak is occurring.

On the International truck I suggest you make sure in regard to the moisture on the plugs. If this is gasoline it is quite possible that the fuel level in carburetor is too high. On the other hand, there is a possibility that the moisture is water which would, of course, indicate a leaking head gasket or possibly a cracked block. Further in this connection I would suggest you check the cylinderhead to make sure it is not warped, and when assembling the job I would recommend the use of a good gasket cement in addition to a new gasket.

There are several causes of high-speed flutter but I would first recommend checking the valve springs to be sure they are strong enough and then check the breaker point spring to see that it is of the proper tension.

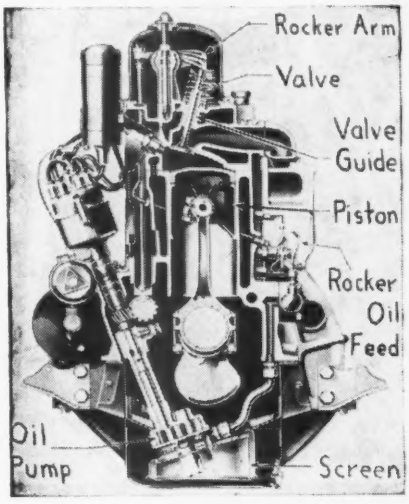
On the 1937 Chevrolet that spits through the carburetor, this might be caused by incorrect setting of the metering rod on the carburetor and it might also be caused by worn intake valve stems and valve guides. Air leaks at the manifold would also cause this condition.

Chevrolet Uses Oil After New Ring Job

Recently one of our customers brought a 1941 Chevrolet to our shop complaining that it was using a quart of oil every 150 miles. The car had about 40,000 miles on it so we sold the customer a ring job.

The engine was torn apart and the cylinders were "miked," showing very little wear. So we installed new rings, wrist pins, skirt expanders, ground the valves and cleaned carbon. We also blew out all the oil lines. The job sounded swell when it left the shop. Now the car is back after about 1500 miles, and the owner says it is using about the same amount of oil as before. Is there anything we may have overlooked or could you offer any suggestions to help us out?—A Chester County Subscriber.

FIRST of all I would examine the job carefully for oil leaks and make sure the breather system is

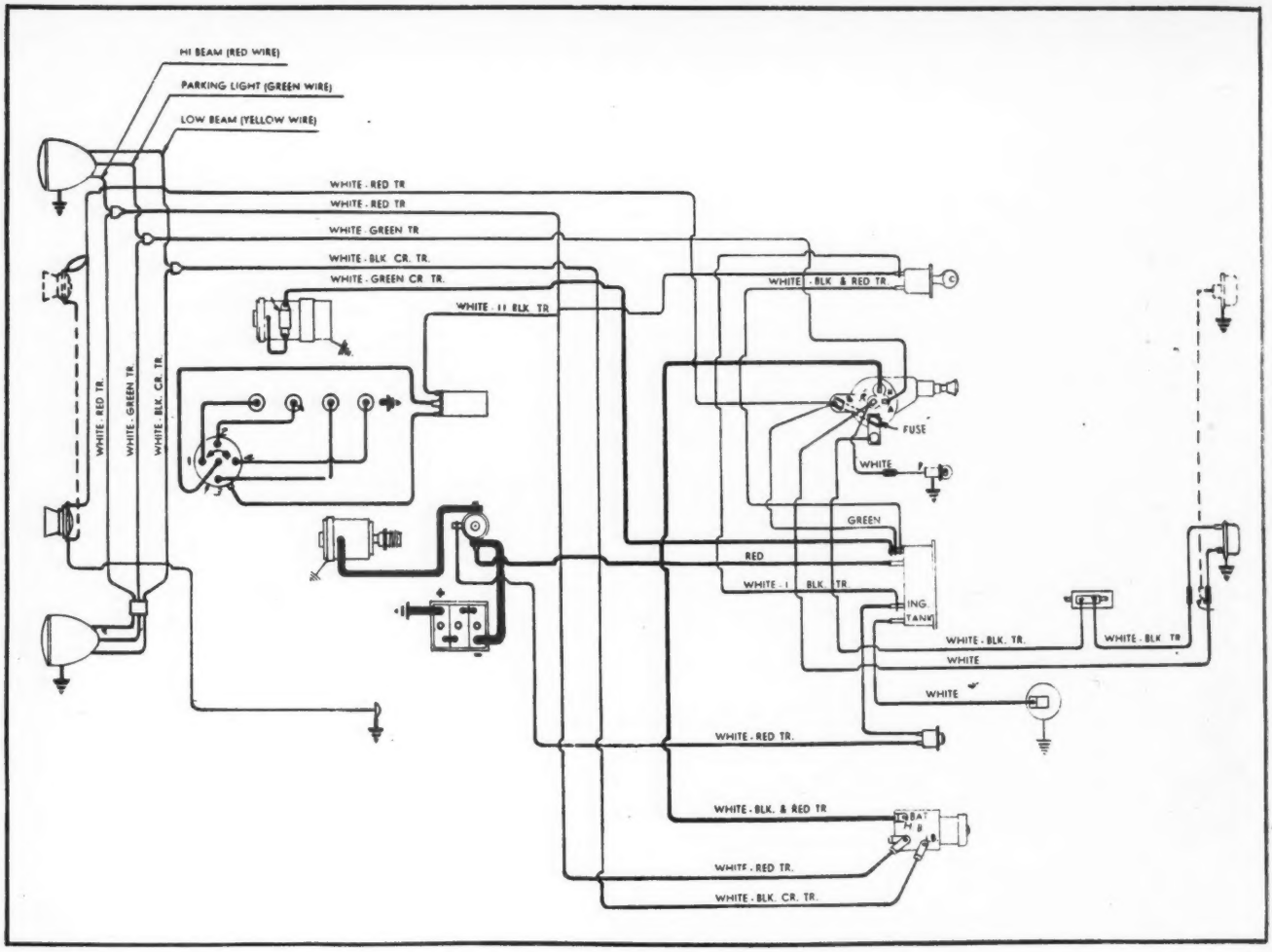


clean. Drive the car on the road, and, if necessary, have someone follow you to see how much smoke comes from the exhaust on deceleration. If excessive, it would indicate that the engine is burning oil.

I would then remove the valve cover and check the flow of oil to rocker arms, also the oil return pipe for kinks and stoppage. On these jobs only the intake valves have oil caps. I would suggest that you also install them on the exhaust valves. Hope some of these suggestions will help you.

BUTCH . . .





Wiring Diagram for 1947 Crosley

Adjusting Timken Axle

I would like to know if you have any instructions on how to adjust a Timken two-speed rear axle in a Chevrolet.—Elmer Ludwig, Utica, Neb.

HOW to adjust a Chevrolet two-speed rear axle is the subject of an article which appeared in MOTOR AGE and which I hope will assist you. I am mailing tear sheets to you.

If we can be of any further assistance please be sure to let us know.

This One Should Have Run But It Didn't

I have a problem, and I do mean a problem, that has me and two other men guessing. We would like to have you explain to us just what our trouble is, if possible.

About a week ago a fellow came to our garage with a 1938 Plymouth. It would not run and would not start by towing, so we checked the timing, reset the ignition points, cleaned and reset the spark plugs, checked both the condenser and coil, checked fuel pump and carburetor. The above work was checked and rechecked, and we were all sure the engine was getting gasoline and a good hot spark to all the spark plugs. We checked the distributor cap and rotor, neither of them were cracked. The battery was fully charged and the starter did turn the engine over at normal speed, but the engine would not fire. Then we used a booster battery, hooked up to the starter to whirl the engine a little faster, and possibly give us a little hotter spark to ignition, but still no results.

After doing all the above work, we could not get the engine to fire at all. We took the car out on the highway and towed it for a mile or more at a speed of 30 to 35 m.p.h. The ammeter was charging 30 amps. but still it would not fire or even spit once.

We went back to the garage and hooked up the starter and the ignition both to 12 volts, and the engine started and ran good. If I unhooked one battery to cut it back onto 6 volts it stopped. So we again hooked up 12 volts to start it. After we got it started we unhooked the one battery and left the starter cable off the battery in the car so only the ground cable was hooked up and the engine kept on running, but as soon as the starter cable was hooked up, the engine would quit running again. By this time we were nearly ready to hit each other in the head with hammers and give up, but we didn't. So on with our puzzle.

We unhooked the ammeter lead wire from the starter terminal and hooked it up to another 6-volt bat-

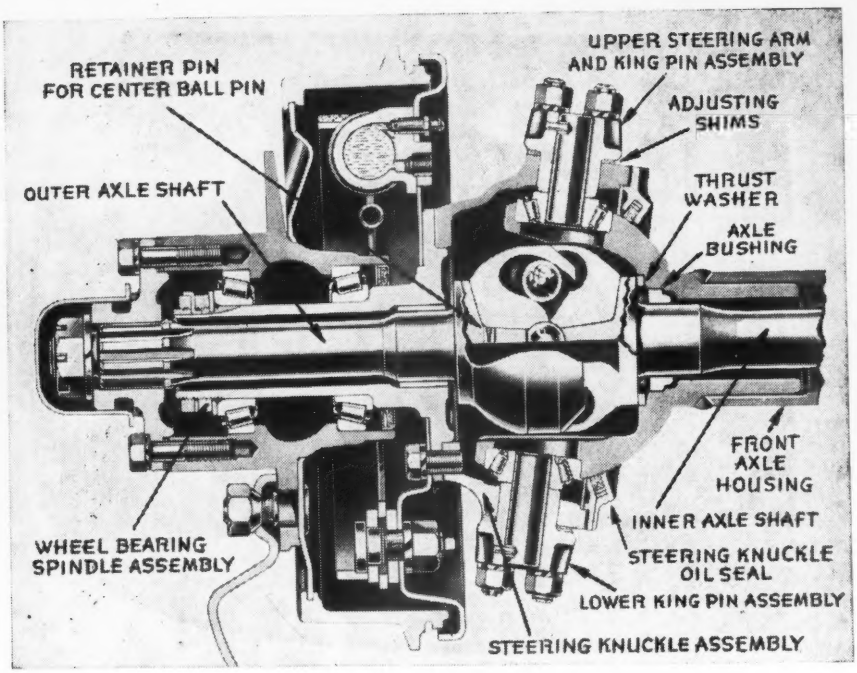
(Continued on page 110)

Current Engine and Tune-up Specifications

MAKE AND MODEL	Wheelbase (In.)	ENGINE: No. of Cylinders, Bore and Stroke	ENGINE: Taxable Hp.	ENGINE: Piston Displacement (Cu. In.)	ENGINE: Maximum Brake Hp. at Specified R.P.M. (with Bare Engine)	ENGINE: Compression Ratio	TUNE-UP DATA: Compression Pressure at Cranking Speed (Lbs.)	TUNE-UP DATA: Spark Plug Make and Type	TUNE-UP DATA: Rings: No. and Width Compression	TUNE-UP DATA: Rings: No. and Width Oil	TUNE-UP DATA: VALVES: Seat Angle: Inlet	TUNE-UP DATA: VALVES: Seat Angle: Exhaust	TUNE-UP DATA: VALVES: Stem Diameter (In.) (Inlet)	TUNE-UP DATA: VALVES: Operating Tappet Clearance: Inlet	TUNE-UP DATA: VALVES: Operating Tappet Clearance: Exhaust	TUNE-UP DATA: VALVES: Inlet Tappet Clearance for Valve Timing	TUNE-UP DATA: VALVES: Timing: Deg. Inlet Opens Before or After TC	TUNE-UP DATA: VALVES: Timing: Timing Marks Located	TUNE-UP DATA: IGNITION: Breaker Point Gap	TUNE-UP DATA: IGNITION: Cam Angle (Deg.)	TUNE-UP DATA: IGNITION: Spark Plug Gap	TUNE-UP DATA: IGNITION: Timing: Spark Occurs °TC	TUNE-UP DATA: IGNITION: Timing: Timing Marks Located	TUNE-UP DATA: Rods Removed From	TUNE-UP DATA: Crankcase Capacity, Refill (Qts.)	TUNE-UP DATA: Cooling System Capacity (Qts.)	FRONT AXLE: Caster (Deg.)	FRONT AXLE: Camber (Deg.)	FRONT AXLE: Toe-in (In.)	FRONT AXLE: King Pin Inclination (Deg.)
Buick.....Eight, 40	121	8-3 3/32 x4 1/2	30.6	248.0	110-3600	6.3	112	AC-48	2-3/32	2-1/16	45	45	.372	.015H	.015H	.015	13BT	None	.015	31	.025	4BT	Fly	A	5 1/2	13	+3/8 ± 3/8	N 1/8 to +1 1/8	0 to 1/8	4 1/8
Buick.....Eight, 50	124	8-3 3/32 x4 1/2	30.6	248.0	110-3600	6.3	112	AC-48	2-3/32	2-1/16	45	45	.371	.015H	.015H	.015	13BT	None	.015	31	.025	4BT	Fly	A	5 1/2	13	+3/8 ± 3/8	N 1/8 to +1 1/8	0 to 1/8	4 1/8
Buick.....Eight, 70	129	8-3 7/32 x4 1/8	37.8	320.2	144-3600	6.6	114	AC-48	2-3/32	2-1/16	45	45	.372	.015H	.015H	.015	14BT	None	.015	31	.025	6BT	Fly	A	7	16 3/4	+3/8 ± 3/8	N 1/8 to +1 1/8	0 to 1/8	4 1/8
Cadillac.Eight, 61, 62, 60	(a)	8-3 1/2 x4 1/2	39.2	346.0	150-3600	7.2	100	AC-104	2-1/4	1-1/8	45	45	.342	HA	HA	HA	TC	VD	.015	31	.030	5BT	VD	A	6 1/2	25	N 1 3/4 to N 2 3/4	N 3/8 to +3/8	1/8 to 3/8	5° 51′
Cadillac.....Eight, 75	136	8-3 1/2 x4 1/2	39.2	346.0	150-3600	7.2	100	AC-104	2-1/4	1-1/8	45	45	.342	HA	HA	HA	TC	VD	.015	31	.030	5BT	VD	A	6 1/2	25	N 1 3/4 to N 2 3/4	N 3/8 to +3/8	1/8 to 3/8	5° 51′
Chevrolet.....Six	116	6-3 1/2 x3 3/4	29.4	216.5	90-3300	6.5	.....	AC-M8	2-.123	1-.186	30	30	.341	.006H	.013H	.006	3BT	Fly	.018	39	.040	5BT	Fly	A	5	15	0 ± 1/2	N 1/4 to ± 1/2	0 to 1/8	4 3/4 ± 1/4
Chrysler.....Six, C-38	121 1/2	6-3 7/16 x4 1/2	28.4	250.6	114-3600	6.6	125	AL-A5	2-1/8	2-1/8	45	45	.340	.008H	.010H	.014	12BT	VD	.020	34 1/2	.025	2AT	VD	A	5	17	N1 to +1	0 to 3/4	0 to 1/8	4 3/4 to 6
Chrysler.....Six, C-39	127 1/2	8-3 1/4 x4 1/2	33.8	323.5	135-3400	6.7	125	AL-A5	2-1/8	2-1/8	45	45	.625	.008H	.010H	.011	12BT	VD	.018	27	.025	2AT	VD	A	6	26	N1 to +1	0 to +3/4	0 to 1/8	4 3/4 to 6
Crosley.....Four, CC-46	80	4-2 1/2 x2 1/4	10.0	44.0	26.5-5400*	7.5	135	AL-A7	2-1/8	1-1/8	45	45	.312	.006C	.006C	.....	5BT	None	.020	46	.025	12BT	Fly	B	3	5	8 1/2	2	1/8 to 1/8	6 1/2
De Soto.....Six, S-11	121 1/2	6-3 7/16 x4 1/4	26.3	236.6	109-3600	6.6	125	AL-A5	2-1/8	2-1/8	45	45	.340	.008H	.010H	.014	12BT	VD	.020	34 1/2	.025	TC	VD	A	5	17	N1 to +1	0 to +3/4	0 to 1/8	4 3/4 to 6
Dodge.....Six, D-24	119 1/2	6-3 1/4 x4 5/8	25.3	230.2	102-3600	6.7	120	AL-A5	2-1/8	2-1/8	45	45	.340	.008H	.010H	.014	12BT	VD	.020	34 1/2	.025	2AT	VD	A	5	15	N1 to +1	0 to +3/4	0 to 1/8	4 3/4 to 6
Ford.....Six 6GA	114	6-3.3x4.4	26.1	226.0	90-3300	6.7	.....	Ch-H10	2-3/32	2-1/16	45	45	.310	.013C	.015C	.015	5BT	.....	.015	35	.025	1BT	.....	A	5	14 1/2	5 1/2 to 8	1	1/8	8
Ford.....Eight, 69A	114	8-3 1/16 x3 3/4	32.5	239.4	100-3800	6.7	160(b)	Ch-H10	2-3/32	2-1/16	45	45	.311	.011C	.015C	.015	TC	DH	.015	35	.025	4BT	.....	A	5	22	5 1/2 to 8	1	1/8	8
Frazer.....Six, F-47	123 1/2	6-3 1/16 x4 5/8	26.3	226.0	100-3600	7.3	.....	Ch.....	2-3/32	2-1/16	30	45	.341	.010C	.014C	.010	10BT	FVD	.020	38	.032	.....	FVD	A	5	15	0 to 1/2	1/4 to N 1/4	0 to 1/8	5 1/2 to 6
Hudson.....Six, 51-52	121	6-3x5	21.6	212.0	102-4000*	6.5	120	Ch-J9	2-3/32	2-(c)	45	45	.341	.006H	.008H	.....	10 1/2 BT	Fly	.020	34	.032	1/2°BT	Fly	A	4 1/2	13	0 ± 1/4	1/2 ± 1/4	1/32 ± 1/32	3° 36′
Hudson....Eight, 53-54	121	8-3x4 1/2	28.8	254.0	128-4200*	6.5	119	Ch-J9	2-3/32	2-(c)	45	45	.341	.006H	.008H	.....	10 1/2 BT	Fly	.017	30 1/2	.032	TC	Fly	A	7	18	0 ± 1/4	1/2 ± 1/4	1/32 ± 1/32	3° 36′
Kaiser.....Six, K-100	123 1/2	6-3 1/16 x4 3/8	26.3	226.2	100-3600	7.3	.....	Ch.....	2-3/32	2-1/16	30	45	.341	.010C	.014C	.010	10BT	FVD	.020	38	.032	TC	FVD	A	5	15	0 to 1/2	N 1/4 to +1/4	0 to 1/8	5 1/2 to 6
Lincoln....Twelve, 66H	125	12-2 11/16 x3 3/4	41.4	305.0	130-3600	7.2	167(b)	Ch-H10	2-3/32	1-1/8	45	45	.311	HA	HA	HA	10.4 BT	TG	.014	35	.027	2BT	None	A	5	27	4	3/4 to 1	1/8 to 1/16	4
Mercury....Eight, 69M	118	8-3 1/16 x3 3/4	32.5	239.4	100-3800	6.7	160(b)	Ch-H10	2-.091	2-.154	45	45	.311	.011C	.015C	.015	TC	DH	.015	35	.025	4BT	.....	A	5	22	7.2	1	1/8	8
Nash.....Six, 4640	112	6-3 1/16 x3 3/4	23.4	172.6	82-3800	7.1	120	AL-A7	2-3/32	1-1/8	45	45	.341	.015	.015	.019	6BT	.....	.020	....	.025	TC	VD	A	5	14	1/4 to 3/4	1/4 to 3/4	1/16 to 1/8	7 1/2
Nash.....Six, 4660	121	6-3 5/16 x4 3/8	27.3	234.8	112-3400	6.8	125	AC-45	2-.124	2-.155	44	44	.372	.015	.018	.008	24 1/2 BT	.....	.020	....	.025	4BT	VD	A	6	17	0 to N 1/2	1/4 to 3/4	1/32 to 1/32	4 1/2
Oldsmobile.....Six	125	6-3 1/16 x4 1/8	29.4	238.1	100-3400	6.5	115	AC-48	2-3/32	2-1/16	30	45	.342	.008H	.011H	.012	5BT	Fly	.020	35	.040	TC	Fly	A	5	18 1/2	0 to N 3/4	N 1/4 to +3/4	1/32 to 1/16	4° 51′ 10″
Oldsmobile.....Eight	125	8-3 1/4 x3 7/8	33.8	257.1	110-3600	6.5	100	AC-48	2-3/32	2-1/16	30	45	.342	.008H	.011H	.012	TC	.....	.015	31	.030	2BT	Fly	A	6	20 1/2	0 to N 3/4	N 1/4 to +3/4	1/32 to 1/8	4° 51′ 10″
Packard.....Six, 2100	120	6-3 1/16 x4 1/4	29.4	245.0	105-3600	6.7	.....	(d)	2-(e)	1-1/8	30	45	.339	.007H	.010H	.012	1BT	.....	.020	....	.028	4BT	.....	...	5	14	N1 ± 1/2	0 ± 1/4	0 + 1/32 — 0	5° 35′
Packard.Eight,2101,2111	120	8-3 1/16 x4 1/4	33.8	282.0	125-3600	6.8	.....	(d)	2-(e)	1-1/8	30	45	.339	.007H	.010H	.012	1BT	.....	.015	....	.028	5BT	.....	...	5 1/2	17	N1 ± 1/2	0 ± 1/4	0 + 1/32 — 0	5° 35′
Packard.Eight,2103,2106	127	8-3 1/16 x4 5/8	39.2	356.0	165-3600	6.8	.....	(d)	2-(e)	1-1/8	30	45	.340	AA	AA	.....	4BT	.....	.015	....	.028	4BT	.....	...	7	20	N1 ± 1/2	0 ± 1/4	0 + 1/32 — 0	5° 35′
Packard....Super-Eight	120	8-3 1/16 x4 1/4	.....	327.0	145-....	7.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth.....Six, P-15	117	6-3 1/4 x4 3/8	25.3	217.8	95-3600	6.8	115	AL-A5	2-3/32	2-3/32	45	45	.340	.008H	.010H	.014	12BT	VD	.020	34 1/2	.025	TC	VD	A	5	15	N1 to +1	0 to +3/4	0 to 1/8	4 3/4 to 6
Pontiac..Six, 1946-25, 26	(f)	6-3 1/16 x4	30.4	239.2	93-3400	6.5	160♦	AC-45	2-3/32	1-1/8	30	45	.312	.011H	.011H	.011	5BT	CC	.020	37	.023	2BT	Fly	...	5	18	N 1/2 to N1	1/4 to N 1/4	0 to 1/8	4 3/8 to 4 7/8
Pontiac.Eight,1946-27,28	(f)	8-3 1/16 x3 3/4	33.8	248.9	107-3700	6.5	158♦	AC-45	2-3/32	1-1/8	30	45	.312	.011H	.011H	.011	5BT	CC	.020	31	.023	2BT	Fly	...	5	19 1/2	N 1/2 to N1	1/4 to N 1/4	0 to 1/8	4 3/8 to 4 7/8
Studebaker.....1947-6G	.....	6-3x4	21.6	169.6	80-4000	6.5	105	Ch-J7	2-(g)	1-3/32	45	45	.312	.016C	.016C	.020	15BT	FVD	.020	35	.022	2BT	FVD	A	5	10	0 to +1	1/2 ± 1/4	1/32 to 1/16	5 1/2
Studebaker....1947-14A	.....	6-3 1/16 x4 1/8	26.3	226.0	94-3600	6.5	105	Ch-J7	2-3/32	1-1/8	45	45	.343	.016C	.016C	.020	15BT	FVD	.020	35	.022	(h)	FVD	A	6	13	0 to +1	1/2 ± 1/4	1/32 to 1/16	5 1/2
Willys.....Jeep	80	4-3 1/16 x4 3/8	15.6	134.2	60-4000	6.5	110	AL-AN7	2-3/32	1-3/32	45	45	.373	.014	.014	.....	9BT	.....	.020	41	.030	5BT	.....	A	4	11	3	1 1/2	1/32 to 1/32	7 1/2
Willys.....4-63	104	4-3 1/16 x4 3/8	15.6	134.2	63-4000	6.5	110	AL-AN7	2-3/32	1-3/32	45	45	.373	.014	.014	.....	9BT	.....	.020	41	.030	.....	.....	A	4	11	1	1	1/32	5 1/2

ABBREVIATIONS

*—With standard accessories.
♦—At 1000 RPM
(a)—Model 61—126 in.; Model 62—129 in.; Model 60—133 in.
A—Above (Rods removed from)
AA—Automatic Adjustment
AC—AC Spark Plug Division
AL—The Electric Auto-Lite Corp.
AT—After Top Center
(b)—At 2400 RPM
B—Below (Rods removed from)
BT—Before Top Center
(c)—Upper ring .1875 in.; lower ring .15625 in.
C—Cold
CC—Crankshaft and Camshaft Sprockets
Ch—Champion Spark Plug Co.
(d)—AC104 or Champion Y4A
DH—Distributor Housing
(e)—Ring No. 1—.093 in.; Ring No. 2—.123 in.
(f)—Models 25 and 27—119 in.; Models 26 and 28—122 in.
Fly—Flywheel
FVD—Flywheel vibration damper
(g)—Top ring 1/8; Middle ring 1/16
(h)—1/8 in. Before Top Center
H—Hot
HA—Hydramatic
N—Negative
TC—Top Center
TG—Timing Gears
VD—Vibration Damper



View of front wheel bearings, constant velocity joint, and knuckle adjusting shims.



How to Align JEEPS

Follow these factory recommendations in adjusting front ends on either Army or civilian type jeeps

by S. B. R. TAYLOR

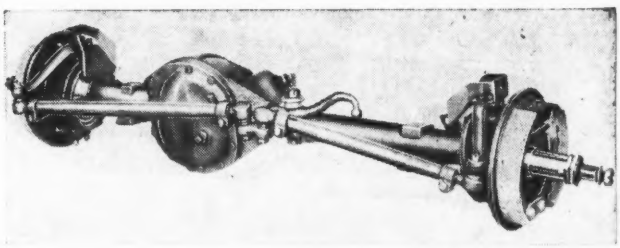
FRONT wheel alignment is as important to the jeep as to any other vehicle, and although the four-wheel drive mechanism makes this front end a complicated looking affair, its adjustment is really simple.

The major factor open to adjustment is that of toe-in which should run from 3/64ths to 3/32nds of an inch. It is adjusted by varying the lengths of the rods running from the steering bell crank to the steering arms just forward of the front axle.

The correct camber for this model is 1½ degrees but it is set at the factory and cannot be adjusted. If the tires wear on the outside shoulder the camber can be assumed to be too great and as bent axle parts are the cause thereof they must be replaced. Under the head of axle parts can be listed the axle housing, the steering knuckle which is also a housing for the constant velocity universal joint, and the wheel bearing spindle assembly. Heating any of these parts to facilitate straightening or attempting to straighten them cold is not recommended by the factory. In the first case because the temper will be lost and in the second case because the relatively thin sections are likely to crack. It is best to install new parts to correct the condition. On the other hand, if the tires are wearing on the inside shoulders the camber is too little or, in proper parlance, it is negative. Negative camber is usually caused by excessive wear in, or looseness of, the front wheel bearings or the steering knuckle bearings. The factory recommends that front wheel bearings be cleaned, inspected and regreased at least every 6000 miles. The steering knuckle bearings operate inside the same housing as the constant velocity universal joint, this housing should be filled each 6000 miles with universal joint lubricant. The bearings are adjusted by shims to offer 25 to 35 inch pounds of resistance as shown by a checking scale hooked into the tie rod end of the steering knuckle arm. It is well to note in this operation that the number of shims used beween the upper and lower spindle caps and the housing should be equal.

(*Continued on page* 106)

Front axle showing steering rods, bell crank, and adjustment points.





STUDEBAKER DEALERS PROUDLY CELEBRATE
A GREAT CAR'S ANNIVERSARY

The far-advanced new 1947 Studebaker



A bigger sensation now than when it first came out... acclaimed everywhere as America's most modern car

Studebaker

POSTWAR LEADER IN MOTOR CAR STYLE

Fixing Flats Before They Flatten Increases Tire Life, Shop Volume and Good Will

You can assure your customer that you can increase his tire mileage so that 50,000 miles per tire is not unusual and also that you can eliminate up to 90 per cent of roadside flats. It sounds fantastic but in addition to the foregoing, you can increase your tube repair business from 50 to 250 per cent.

It isn't too good to be true for it has been proved by actual tests made by the manufacturer of Schrader tire valves.

All that is necessary is a tire gage and the determination to check tire pressures before inflation. Then you should sell the customer on the advantage of having the necessary tire repairs made before the tire goes flat on the road.

There is nothing new about the method which the Schrader Company calls the comparative air loss system. They were all set to introduce it early in the war, but various shortages and limitations prevented launching the campaign.

The entire plan started several years ago when a Schrader official deliberately drove a two-penny nail into each of his tires and found that he was able to drive over 2000 miles before a tire went flat. Of course, these tires were inflated periodically during that period. But the average car driver would not have been aware that the tires were punctured until they went flat on the road.

Checking air pressure on tires on hundreds of cars disclosed that on one-third of the cars at least one tire was losing air more rapidly than the others. Further checks showed that approximately 25 per cent of the cars examined had tires with punctures and these punctures were indicated by the fact that the pressure of the punctured tire before inflation was at least two pounds lower than the others.

That is the substance of the plan. Check tire pressure before inflation. Any tire that is lower than the others is pretty sure to be punctured or is losing air through the valve. It must be emphasized that the pressures are not compared to the recommended pressure but to the pressure of the other tires.

(*Continued on page* 178)

New Process for Rendering Castor Oil Gum Free Permits Its Use in All Cars

For many years castor oil has been synonymous with racing. When records were made and high speed prevaile, castor oil was the lubricant. It had many important advantages and the primary reason it was not used in passenger car engines was because of its tendency to gum. In automobile racing this did not matter. After each race the engine would be completely dismantled, cleaned and prepared for the next race. The ability of castor oil to carry high loads, its freedom from carbon and other important advantages, easily out-weighed the single disadvantage.

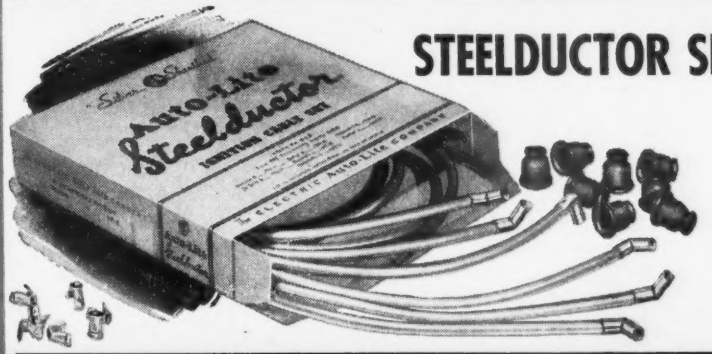
However, a newly developed process has rendered castor oil gum-free, and, according to the manufacturers, the new product used as an additive or an uper cylinder lubricant, has the ability to penetrate carbon sludge and binders, and the ability to dissolve and dispose of the sludge immediately when the penetrating elements have done their work. It also forms a protective oil film on the metal surfaces previously covered by carbon residue.

While castor oil and mineral oil do not readily mix, the new degummed castor oil does mix with mineral oil, and tests made by the manufacturer indicate that engine parts remain much cleaner when the special additive is used. Other tests tend to prove increased compression because valves seated better and rings were free in their grooves.

The manufacturer states that different types are available for use as penetrating oils, engine oil additives, cylinder lubricants, and for adding to the fuel.



Switch to— AUTO-LITE



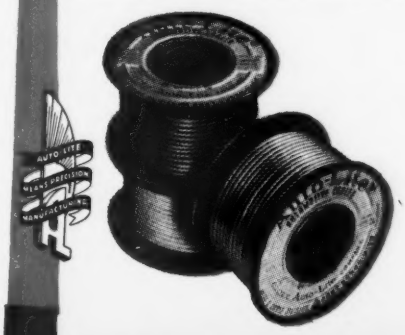
STEELDUCTOR SPARK PLUG WIRE SETS

Auto-Lite furnishes spark plug wires in both copper and in Steelductor, an automotive type of the 7 strand stainless steel conductor proved on America's fighting planes. Available on Spools or convenient ready-to-install sets complete with terminals.

BATTERY CABLE WITH ANTI-CORRODE TERMINAL

Properly installed, Auto-Lite Battery Cable with the revolutionary Anti-Corrode Terminal resists corrosion that builds resistance and restricts proper current flow to the starter and other electrical units.





LOW TENSION WIRE

Auto-Lite wire and cable is a complete line, for every automotive use. Wire for lighting and other low tension circuits is available in many shapes, sizes and insulation materials. A new catalog giving complete specifications of Auto-Lite automotive wire, both on spools and cut-to-length sets, will soon be off the press. Write for your copy.

THE ELECTRIC AUTO-LITE COMPANY

Toronto, Ontario **Toledo 1, Ohio**

AUTO-LITE
Automotive Wire & Cable

RSD MERCHANDISING

AUTO-LITE
REGISTERED SERVICE DEALER

Investigate the 4-way advantage of the Auto-Lite Registered Service Dealer plan: (1) Registered Service, (2) Contract Price, (3) Adequate Inventory, (4) National Advertising.

TUNE IN "LAWYER TUCKER" STARRING PARKER FENNELLY, THURSDAY NIGHTS, 9:00 P.M.—E.T. ON CBS

New PRODUCTS



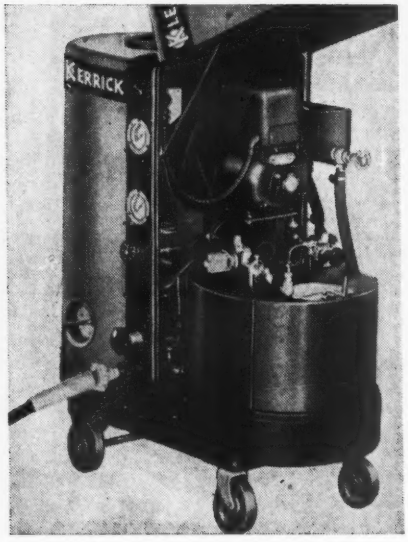
Ammco Ridge Reamer

A new ridge reamer, announced by Ammco Tools, Inc., North Chicago, Ill., is claimed by the makers to remove a cylinder ridge in 20 seconds, not including setup time.

Features are a new thin, tool-steel blade and an automatic stop on the blade adjustment screw. The operator is afforded a clear view of the work while it is in progress. The tool is held in position by a centering head and three adjustable support jaws. An expansion knob adjusts the jaws and locks the reamer in the cylinder.

Model C Kerrick Kleaner

Embodying several features new to the low priced steam cleaner field, the Model C Kerrick Kleaner,

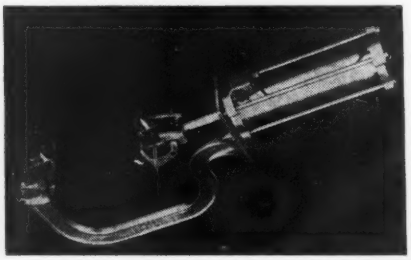


made by the Clayton Manufacturing Co., of El Monte, Cal., is now available for immediate delivery.

This cleaner includes an automatic soap dispensing unit, pressure atomizing burner, insulated fire box and shell, electric ignition, protective shut-off of fuel and a displacement pump which requires no lubrication. Housed in a dust-proof cabinet, all parts are accessible for service by lifting a hinged hood.

Vermillion Pneumatic Tire Tool Offered

The H. E. Furman Manufacturing Co., 633 West Davis St., Dallas, Texas, is offering a new unit, the



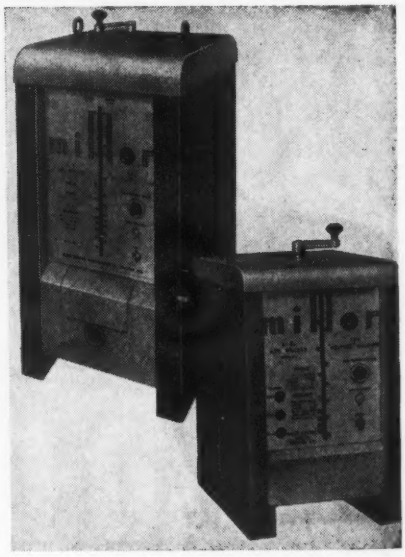
Vermillion Pneumatic Tire Tool, that removes tires with the wheel and hup cab in position.

This tool uses station air pressure on a standard air line hose to operate two pushers which work off an air piston. These pushers incorporate dogs that snap down toward the bottom of the rim when the pushers are set against the edge of the rim. This action forces the tire bead out of the rim groove. Working from both sides of the tire, the pushers force it toward the center and allow it to be removed. The tool has a release valve and pressure control to control its action.

Miller A.C. Welders For "Heliarc" Welding

The Miller Electric Manufacturing Company of Appleton, Wis., has introduced a new series of A.C. welders especially designed for "Heliarc" (a trademark of the Linde Air Products Co.) welding, a process requiring an A.C. welder of heavier construction than the metallic arc process. These units incorporate adjustable high frequency current and high duty cycle ratings. The high frequency unit is equipped with a variable control, enabling the operator to change or to vary the voltage of the high frequency circuit.

By the Heliarc process it is possible to weld aluminum without

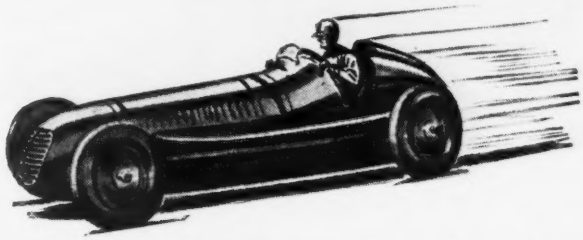


flux. It is especially adapted to welding magnesium, stainless steel, high carbon steels, high alloy steels, brass, Everdur, Monel and copper.

(*Continued on page* 68)



Proved AT INDIANAPOLIS!



The 500-mile race at Indianapolis is often called "The Laboratory of Speed." And in this famous laboratory, the effectiveness of MOTOR RYTHM has been proved! Here's the evidence:

EXHIBIT "A"

Thirty cars started the 500-mile grind. Of the ten cars still running at the finish, SIX USED MOTOR RYTHM!

EXHIBIT "B"


WESTERN UNION

JOSEPH L. EGAN, PRESIDENT

SYMBOLS
DL = Day Letter
NL = Night Letter
LC = Deferred Cable
NLT = Cable Night Letter
Ship Radiogram

CLASS OF SERVICE
This is a full-rate Telegram or Cable-gram unless its de-ferred character is in-dicated by a suitable symbol above or pre-ceding the address.

The time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

PP56 DL PD—INDIANAPOLIS IND 31 743A

WHIZ AUTOMOTIVE DIVN.
R. M. HOLLINGSHEAD CORP.
CAMDEN, N.J.

ENGINE IN MY BENNETT BROS. SPECIAL NO. 1 FUNCTIONED PERFECTLY ... IN 500 MILE RACE AT INDIANAPOLIS SPEEDWAY. USED WHIZ MOTOR RYTHM. YOUR PRODUCT DESERVES MUCH CREDIT FOR EXCELLENT PERFORMANCE IN THIS TOUGH RACE.

TED HORN

(Ted Horn—AAA National Champion)

EXHIBIT "C"

Car No. 59, the Camco V-8 Special, went into the 26th lap with oil pressure at zero because of a broken oil line. The driver did not stop at the pits until the 141st lap, when he added *a gallon of water* to the crankcase (AAA rules prohibited the addition of oil). He stayed in the race until the 179th lap... *covered 382 miles at racing speed in spite of this condition!* Both the driver and the mechanic give credit to the MOTOR RYTHM and motor oil with which he started the race.

This is the kind of proof your customers understand. Be sure to tell them about MOTOR RYTHM. Tell them what it did for so many of the money winners at Indianapolis . . . tell them what it can do for *them*. And be sure to place an order for MOTOR RYTHM with your jobber *today*. *R. M. Hollingshead Corporation. General Offices: Camden, New Jersey. Canadian Offices: Toronto, Canada. Warehouses: Dallas, San Francisco, Chicago.*

Whiz

A PRODUCT OF
Hollingshead
LEADER IN MAINTENANCE CHEMICALS

New Products . . . . . (*Continued from page* 66)

Graco Underbody Coating Service Pump Introduced

A new underbody coating service pump for handling the wide variety of materials used in the underbody coating of automobiles has been announced by the Gray Company, Inc., Minneapolis 13, Minn.

The air-operated pump is designed on the same principle as Graco's lubricant supply pumps. The pump handles the material directly from the original containers and has three adjustable hand screws which adapt the pumping unit to fit different barrel sizes. A solvent cup mounted on the drum cover holds the spray gun when it is not in use and prevents the material from hardening in the nozzle. The pump unit has 25 feet of air and material hoses. The unit comes complete with drum cover, gages and regulators, with spray gun optional.

Grizzly Bonded Brake Linings Announced

The Grizzly Manufacturing Co. has announced the availability of brake lining segment sets specifically designed for application by the bonded brake lining process. The



bonding agent is applied to these linings at the time of manufacture, eliminating the necessity of storing, handling and applying bonding agents in the field.

With the bonding agent already applied to the shoe side of the linings, the bonding process is reduced to proper cleaning of the old shoes, clamping in place of the lining segments and curing. According to the manufacturer, material costs for the new linings will be comparable to the cost of ordinary riveted lining.

Van Norman Diam-A-Gage

The Van Norman Company, Springfield 7, Mass., has brought out a device, called the Diam-A-Gage, which measures the diameter of brake drums to the nearest thousandth of an inch.

Resembling a graduated strip of steel, the Diam-A-Gage fits inside the drum, where the graduated markings line up to give the diameter after the manner of a vernier. Once the operator has arrived at the diameter of the drumby using the Diam-A-Gage, he can set the micrometer dial on the brake shoe burnisher to duplicate this diameter on the brake shoe.

New Electric Auto-Lite Plugs

Now available for truck operators is a new series of spark plugs manufactured by the Electric Auto-Lite Co., of Toledo 1, Ohio.

(*Continued on page* 70)



Supreme

IN BEAUTY... IN SERVICE ...IN LUBE PROFITS *for* YOU



NEW ARO *Supreme* LINE OF LUBRICATORS

You'll service more cars—with less labor and more profit! ARO's *new beauty* and *new illumination* help bring in business! ARO's *new practical features* speed up and improve your service!

Learn more about the many new ARO features... Write for literature on the Supreme line of ARO Lubricators or see your Aro Jobber. The Aro Equipment Corporation, Bryan, O.

Concealed Hose and Nozzle ... Simply open bin and service assembly is at your fingertips. Easier to use... cabinet may be closed while operating.

ARO

LUBE EQUIPMENT AND AIR TOOLS FOR AUTOMOTIVE SERVICE... INDUSTRY... FARM

New Products . . . . . (Continued from page 68)

These new plugs, called "transport plugs," are especially designed for the trucking field and have a wider heat range than heavy duty types previously made by Auto-Lite by virtue of the increased length of the firing tip on each range of the plug.

The plugs are available in 14 mm., 18 mm. and 7/8-18 thread sizes.

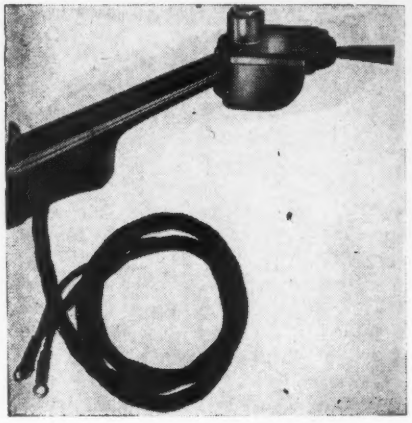
Wyzenbeek Flexible Shaft Machinery Catalog

A new thirty-two page illustrated catalog showing the complete WYCO line of flexible shaft equipment, is now available through Wyzenbeek and Staff, Inc., 838 W. Hubbard St., Chicago 22, Ill.

A number of new WYCO machines, including the Wycomatic "Speed Changer," a variable speed flexible shaft machine, selective to any desired speed, and the Streamflex cabinet enclosed models, are illustrated and described, along with information on how to order shafts and recommendations as to proper models and types of shafts for various kinds of work. Copies may be obtained direct from the manufacturer.

Directional-Signal Switch

A new directional-signal switch has been developed by the Arrow Safety Device Company of Mount Holly, N. J. The makers claim



that it will give long, trouble-free operation, since it far exceeds SAE requirements which call for 175,000 on-and-off cycles.

Available in black enamel finish, this unit mounts on the steering post where it can be reached by the finger.

Multiflame Brazing Tips by Air Reduction

The addition of three new multiflame brazing tips to their apparatus line has been announced by the Air Reduction Sales Co., 60 E. 42nd St., New York 17, N. Y.

The tips are recommended for use in silver brazing, high temperature brazing and in the application of hard-faced alloys. The three new styles, Nos. 721, 722 and 723, are especially adapted to the automotive, aviation and refrigeration fields.

Style 721 is a light tip brazed to the end of a short flexible copper extension, and is available in sizes

(Continued on page 72)



QUICK TURNOVER!

Stocks that gather dust don't gather profits. A sure springboard to fast turnover is a complete stock of Schrader Products—particularly the New Display Packages of Caps, Cores and Gauges. Set up your Displays of the Schrader Products where they will be seen . . . and you'll make many extra sales—extra profits!

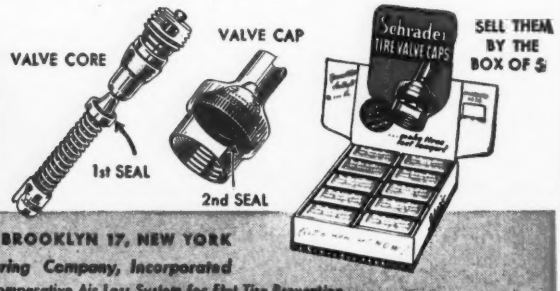
Schrader advertising in National Consumer, and Farm publications tells vehicle owners to "look for and buy from these Schrader Displays at your dealers." Tie in with this timely advertising for quicker turnover—order from your regular supplier today.

Sell a Schrader Gauge to Every Vehicle Owner

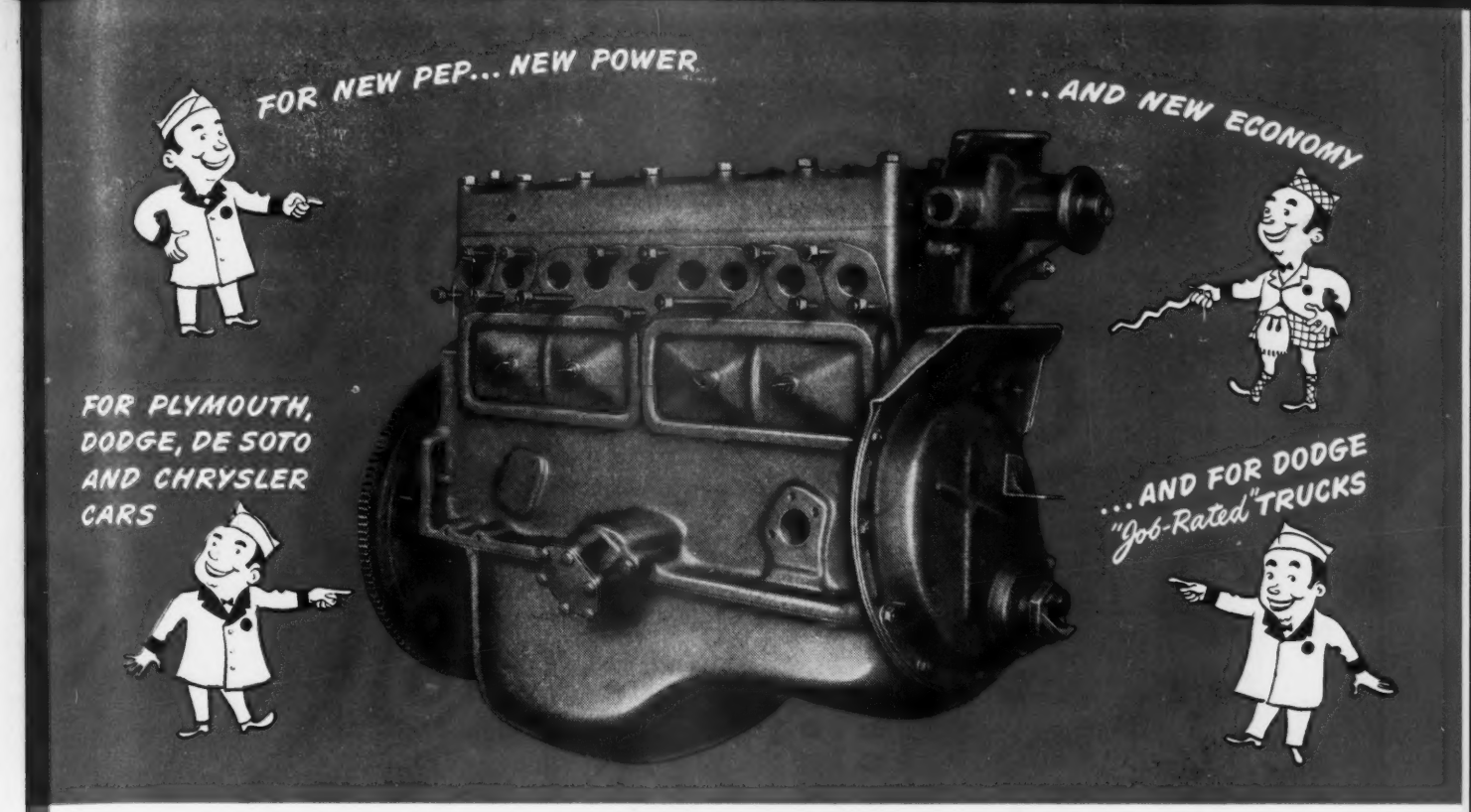
The Complete Line—ONE SOURCE ONE RESPONSIBILITY

Tire Valves, Valve Caps, Valve Cores, Tire Pressure Gauges, Chuck Gauges, Couplers, Blow Guns, Air Chucks, Vulcanizers, Service Tools, Hose Fittings, Spark Plug Pumps, Accessories.

Schrader
PRODUCTS CONTROL THE AIR



A. SCHRADER'S SON • BROOKLYN 17, NEW YORK
Division of Scovill Manufacturing Company, Incorporated
Originators of the Comparative Air Loss System for Flat Tire Prevention



Save Time! Save Money! WITH BRAND NEW REPLACEMENT ENGINES

When your customers' cars or trucks face a costly overhaul, here's how to save time and money—for yourself and for your customers.

If it's a Chrysler Corporation vehicle, install a new engine *built* by Chrysler Corporation.

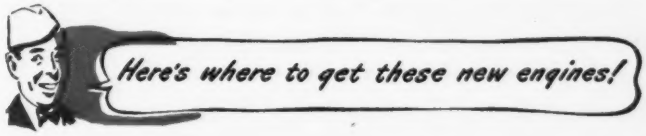
All of these engines are *brand new*—not rebuilt! They're engineered and built by Chrysler Corporation especially for Plymouth, Dodge, De Soto, and Chrysler cars, and for Dodge "*Job-Rated*" Trucks. Furthermore, they include the newest improvements in engine design and manufacture.

That's why they give new power and new economy. And they give a whale of a lot of satisfaction—the kind that builds good will.

CHRYSLER CORPORATION—PARTS DIVISION—DETROIT 31, MICHIGAN

NOT REBUILT!

- **Completely new engines (less accessories).**
- **Assembled and block-tested at the factory.**
- **All new precision-made parts.**
- **Built to latest precision standards.**



You can get brand new engines (less accessories) for Plymouth, Dodge, De Soto, or Chrysler cars, and Dodge "*Job-Rated*" Trucks from dealers for these vehicles.

USE CHRYSLER CORPORATION PARTS DIVISION
MoPar
PARTS AND ACCESSORIES
FACTORY ENGINEERED AND INSPECTED

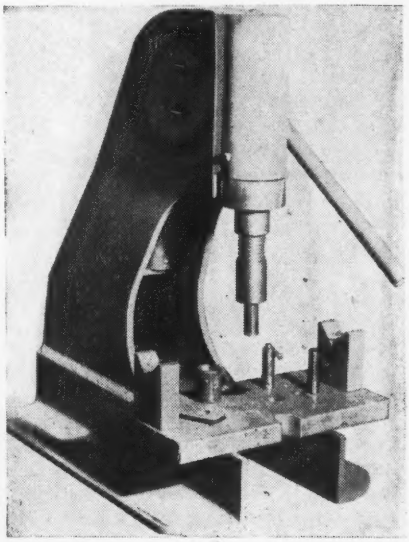
Factory Engineered and Inspected for

PLYMOUTH · DODGE
DE SOTO · CHRYSLER CARS
DODGE *"Job-Rated"* TRUCKS

5, 6, 8 and 10. Style 722 is a dual tube tip on a flexible copper extension in sizes 5 and 7. Style 723 is for operations where the operator must be farther away from the work and is to be used with a standard 10 in. flexible extension tube. All tips can be operated with various gas combinations, oxyacetylene, oxyhydrogen, ox-city or natural gas.

Ruger Portable 10-Ton Hydraulic Arbor Press

Weighing a total of 100 pounds, the new Ruger 10-ton portable hydraulic arbor press is designed to be transportable by one man. The stroke of the hydraulic ram is 6⅝ in., while the height of the ram to work can be adjusted by rotating the lower part of the ram to right or left over an adjustment of 6 in. The length of the stroke of the operating lever is adjustable to suit the job. A relief valve is built into



the hydraulic system, to by-pass the oil when the maximum press capacity of 10 tons is reached. The price, $127.50, includes table with cut-outs properly spaced with holes for positioning V-blocks, also V-blocks and other necessary attachments.

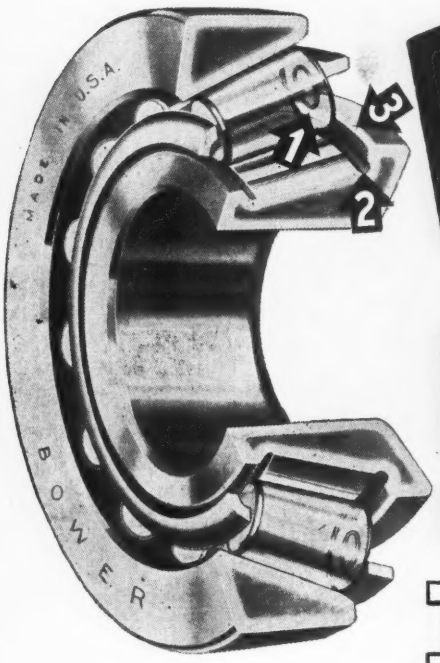
Teleoptic Fender Lamp

Reduced battery drain is claimed for the new Tele-Fender Parking Lamp by its makers, the Teleoptic Company of Racine, Wisconsin.

Designed to draw only 11/100 amperes per hour, this lamp is stated to give a continuous bright light visible at 1,000 feet. Chrome-plated, with a ruby-glass lens, each unit weighs less than 3 oz. The threaded mounting base mounts into the fender where it is secured with washer and nut.

Quickee Hand Cleanser Available in Tubes

Quickee Waterless Hand Cleaner is now available in tubes as well as cans. This hand cleanser, which contains no grit, abrasive or alkali, is claimed to remove grease, paint grime, stains, tar, glue, merely by rubbing it briskly on the hands and wiping them off with a dry rag. No water is used with Quickee, which contains lanolin and vegetable oils. The manufacturer is the Tudor Chemical Specialties Co., Inc., 229 West 179th St., New York 53, N. Y.



Why BOWER tapered roller Bearings ?

1 TWO ZONE CONTACT
ASSURES PERFECT ALIGNMENT—SQUARED-UP ROLL HEADS.

2 EXTRA DEEP OIL GROOVE
PROVIDES BETTER LUBRICATION—LONGER LIFE

3 ROUNDED FLANGE SHOULDERS PREVENT CHIPPING AND NOISE—SMOOTH CONTACT. THESE, PLUS THE FAMOUS SPHER-O-HONED FINISH OF BEARING SURFACES, ARE ASSURANCES OF LONG, FAITHFUL SERVICE AND S-M-O-O-T-H ROLLING.

See your Ahlberg jobber today for Bower Bearings and a complete bearing service including ball and roller bearings for every requirement—competent, up-to-the-minute design and application counsel if you need it.

AHLBERG BEARING COMPANY
3028 WEST 47TH STREET
CHICAGO 32, ILLINOIS

NEW LIFE for CON-RODS



with

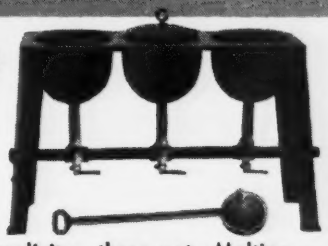
WATERBURY-SIMPLICITY REBABBITTING SERVICE . . . .

Life is easily restored to worn Con-Rods with the Waterbury-Simplicity three-way rebabbitting system: 1 — Triple melting pot, 2 — Rebabbitting jig, 3 — Twin-head Con-Rod boring machine. All three are outstanding performers for shop men . . . delivering quality with speed and profit. Investigate these profit makers. Write for free literature and name of nearest jobber.

WATERBURY Simplicity REG. U.S. PAT. OFF.
Engine Rebuilding Equipment

1 Melting

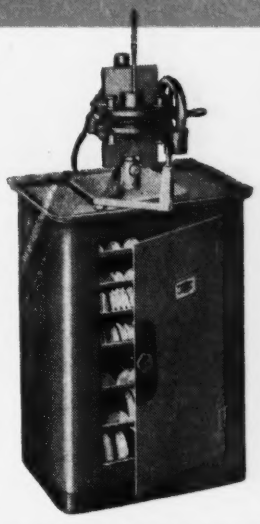
TRIPLE Melting Pot FURNACE



The Waterbury-Simplicity three-pot Melting Furnace is a necessary unit for this rebabbitting service. It is constructed of cast iron with removable non-tilting pots. Each pot has a separate direct jet burner with shut-off valve. Available for manufactured, tank or natural gas.

2 Pouring

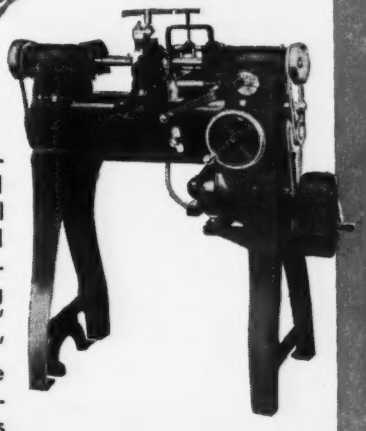
CON-ROD Rebabbitting Jig



High speed — high production Waterbury-Simplicity Rebabbitting Jig with electric heating element for connecting rods. Locking device holds die securely in position with perfect alignment. Just snap rod in place on mandrel, pour metal and jig is ready for the next rod.

3 Finishing

TWIN-HEAD CON-ROD Boring Machine



The Waterbury-Simplicity is the only Con-Rod boring machine that will bore, face and cut oil grooves without changing tools or recentering rod. Handles rods 1⅛" to 4" in diameter, 24" in length. Will handle shell type, split bearings. Two sizes—models #2 and #3.

WATERBURY TOOL Division of Vickers, Incorporated
282 EAST AURORA STREET, WATERBURY 91, CONNECTICUT, U. S. A.
• Also Piston Turning & Grinding Machines •
Twin-Action Cylinder Grinder • Line Boring Machines • Piston Corrector

Thor

PORTABLE ELECTRIC

Thor

PORTABLE ELECTRIC

Thor

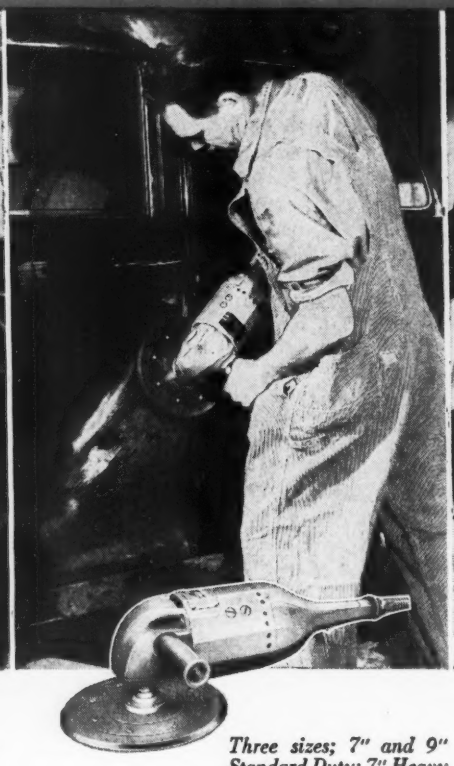
PORTABLE ELECTRIC

SEAT GRINDERS



Furnished with complete seat grinding kit

SANDERS



Three sizes; 7" and 9" Standard Duty; 7" Heavy Duty

POLISHERS



Standard and Heavy Duty models; 8" bonnets



VALVE REFACERS



"MULTI-MATIC" AIR TOOL KIT

Seven complete pneumatic tools in one compact kit.

ALL THIS, AND A FULL LINE OF ACCESSORIES, TOO!

Thor

PORTABLE ELECTRIC

Thor

PORTABLE ELECTRIC

Thor

PORTABLE ELECTRIC

DRILLS



Eighteen ¼" models, speed ranges from 700 to 5,000 r.p.m.

GRINDERS



Three sizes; 4", 5" and 6", heavy duty

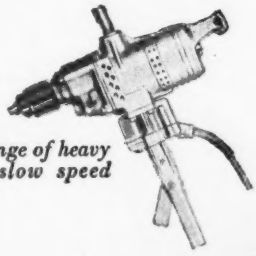
BENCH GRINDERS



Three models, 6" and 7" Heavy Duty; 6" Standard Duty



Most popular ½" drill in the field



Full range of heavy duty, slow speed models

CALLED ON A THOR JOBBER LATELY?

A Thor Jobber near you is featuring this complete line of Thor electric and pneumatic tools—the same high quality tools that build the cars you repair. Look over his line. If there isn't a Thor jobber near you write for Catalog A-1.

INDEPENDENT PNEUMATIC TOOL COMPANY

600 W. Jackson Boulevard, Chicago 6, Illinois

Export Division: 330 W. 42nd Street, New York 18, N.Y.

Birmingham Boston Buffalo Cincinnati Cleveland Denver Detroit Houston
Los Angeles Milwaukee New York Philadelphia Pittsburgh St. Louis St. Paul
Salt Lake City San Francisco Toronto, Canada Sao Paulo London, England

Thor **PORTABLE POWER TOOLS**

ONLY THOR JOBBERS SELL TOOLS FOR EVERY SHOP'S EVERY JOB!

Brake Bonding . . . . (*Continued from page 39*)

binder in a can to be applied to the shoe with a brush, another sells it as a strip which is cut to length as used. A third company markets engineered segment sets with the bonding agent already applied to the lining thus doing away with the storing and handling of bonding agents in the field. Aside from the method of applying the material, the bonding of brake lining to brake shoes follows a regular pattern.

The lining, plastic and shoe are clamped together so that the pressure is evenly distributed. The assembly is then placed in an electric oven and held at approximately 300 degrees F. for 30 minutes. When the bonded shoe and lining assembly has cooled, it is examined to be sure that at least 60 per cent of the lining is thoroughly bonded to the shoe. If the bond is solid at the center and the two ends, the assembly is ready to be installed.

While two models of Dodge trucks are the only vehicles equipped at the factory with bonded brakes at the present time, there are persistent rumors that bonded brakes will soon be factory equipment on most current model passenger cars.



EASY Ford Valve Removing Kit

Made by the U. P. Manufacturing Co., 3498 Union Pacific Ave., Los Angeles 23, Cal., the EASY Ford Valve Removing Kit contains 16 keepers and one wrench specially designed for removing Ford valve assemblies. The keepers are numbered from 1 to 16 for easy identification of valves. Valves can be ground and assembled on the bench and a keeper numbered to correspond with the correct valve placed on the valve stem.

The valve assembly is removed by putting a bar under the bottom of the valve and raising the valve head above the block high enough to allow the EASY keeper to be inserted on the stem. The valve head is then pounded until the keeper is released and can be pulled out of the guide. The valve assembly is pushed out of the block with the bar, the keeper remaining on the stem, from which it is removed with the EASY wrench. This procedure is reversed for reinstallation.



When it comes to VALVES
Count on Allied

for Accuracy
for Life
for Performance



● The advanced bi-metal construction of Allied Exhaust Valves assures your customers of performance and life unexcelled by any valve, at any price. The Austenitic Stainless Steel head is remarkably resistant to corrosion . . . has an extraordinary ability to hold its strength and shape under high heat. The nickel-chromium stem is outstanding in its resistance to wear.

In their accuracy of manufacture, Allied Valves are typical of all Allied Motor Parts. Coming from plants whose manufacturing capacity and production facilities are unsurpassed in this industry, Allied Parts can always be relied upon to equal or exceed in quality the parts they replace . . . Your Allied Jobber is headquarters for fine motor parts.

ALLIED MOTOR PARTS COMPANY, Detroit 1, Michigan

When the Motor is Down Build it Up with—

Pistons • Piston Pins • Piston Pin Set Screws • Piston Pin Lock Rings
Valves • Valve Keys • Valve Guides • Valve Springs
Expansion Plugs • Cylinder Sleeves • Cylinder Sleeve Assemblies
Water Pumps • Water Pump Parts and Packing

Allied Motor Parts are quickly available from NAPA Jobbers everywhere. Master stocks maintained in 39 NAPA Warehouses

Allied
MOTOR PARTS

NAPA
National Automotive Parts Association
Assurance of Quality

Buick Dealer . . . . . (*Continued from page* 42)

gently. As a matter of actual practice, Harrod said most of the department managers spent their spare time looking for merchandise and figuring new selling angles in order to increase their volume.

This system had results more far-reaching than they dreamed. Each manager created so much activity that he created a new circle of friends for the company, made work for all the other departments and widened the scope of the entire operation.

"Before the war," Harrod said, "our principal business was selling new automobiles. We had what we thought was an efficient and well managed operation. We had an efficient service department, but it was geared to service our car-owner customers and new car owners. Now we service all makes. We have the know-how and the equipment and the parts for all makes, but we specialize in our own Buick service. The increase in volume as well as in profits would not have seemed possible in the period before the war. Service has increased more than six times, but the sale of parts has soared to astronomical heights compared to our previous volume."

When the war struck, Harrod said he went to an emergency meeting of dealers in Chicago. Gloom there was so thick it could be cut with a knife. Priceless dealerships in all parts of the country could have been bought for a song.

Harrod went home depressed by the gloom of the meeting, convinced that he would have to close up his 32-year-old business. Tires and automobiles were frozen.

He was given an opportunity to sub-contract on a manufacturing project for an essential war part and decided to turn his new building into a war plant. He went out into the highways and byways and finally gathered together enough manufacturing equipment such as lathes, screw machines and drill presses to make the part and was then informed that all the contract had been taken by another manufacturer and that all of his work and money spent was for naught.

He took stock of his situation. He had operated as a going concern of some importance in this section of

(*Continued on page* 80)



"THERE'S ALWAYS PLENTY OF PROFITABLE WORK for an Atlas 10" LATHE"



Photo from a Philadelphia Service Shop. (Cloth protects bed from abrasive dust.)

You can push those valve grinding jobs through in a hurry with an Atlas lathe. A Jacobs chuck holds the stem. Takes but a minute a valve.

This is but one of 44 ways an Atlas can be put to daily profitable use in your service department. Armatures, generators, starters, bushings, bearings, making scarce parts and special tools can keep an Atlas busy most of the time. Ask your jobber for full details. Send for illustrated catalog.

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"This soft water tastes much better than that hard city water."


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Fine quality has placed Ditzler "DAL" Automobile Lacquers first with finish men. Every ingredient, every manufacturing step has but one purpose—to make these lacquers the finest there are in workability, durability and satisfaction to you and your customer.
Available in solid colors and polychromatics and in blacks, whites, and clears.
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DITZLER COLOR DIVISION
PITTSBURGH PLATE GLASS COMPANY
DETROIT, MICH. U. S. A.
DITZLER

Buick Dealer . . . . . . (*Continued from page* 78)

Kentucky for more than 30 years and he believed there was some way to remain in business. He resolved to find that way.

He toyed with the idea of substitute merchandise and new departments to keep going until after the war when he could return to his old style of doing business.

His new building had just been completed when the war started. The first major change was when he bought the recapping plant and moved it into his new automobile sales room.

He realized that departmentalization was a fine thing provided that you had good managers who would maintain active departments. Logically he next thought that the best way to keep up interest was to set up an incentive pay plan for managers and to allow them to participate in the profits. He started them on a basis of a good salary and a percentage and most of them make more money in bonus money than their salary.

His plan for incentive pay is as follows:

The service manager draws a set salary every week. In addition to his salary he gets 1 per cent of the first $1,800 parts sales and 2 per cent on all parts sales above this. In addition he receives 2 per cent of all labor sales over and above $1,500. These bonuses are paid to him monthly. The sales quota of $1,800 and $1,500, respectively, were the pre-war average figures per month. Throughout the year a 20 per cent monthly net profit reserve accrues, and at the end of the year the sales manager receives part of this bonus which is shared by all employes. It amounts to about 33 per cent of his weekly salary plus incentive pay.

The business includes a large filling station operation and the manager of that department is paid a weekly salary plus 5 per cent on all sales, excluding gas and oil, and ½ cent per gallon on monthly sales of gasoline in excess of 15,000 gal. He also shares in the annual bonus.

The night manager's arrangement is similar to the service and filling station manager's but his annual bonus is smaller than

(*Continued on page* 82)

For MORE profits . . . . . for SAFER brake jobs
INSIST ON
Ready to Install
BUNDYFLEX
RIGID METAL HYDRAULIC BRAKE LINES



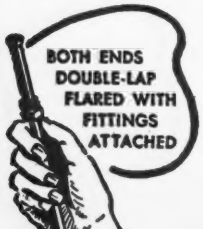
Original Equipment on Every Car and Truck since 1935

90% OF ALL REPLACEMENTS can be made from this new, fast-selling

No. 475 DEALERS DISPLAY ASSORTMENT

Handle those urgent hydraulic brake line jobs promptly . . . and profitably with Bundyflex ready-to-install brake lines. No more hunting for the right tubing or fittings; no more tube cutting or flaring. In a few minutes, you've duplicated the *original installation* with one of the 6 popular numbers from your handy Bundyflex assortment.





Extra long lines easily made with EVERHOT 300C ¼F x ¼F inverted flare union.

LIST PRICE EACH $14.80 DEALER PRICE EACH $9.85

ATTRACTIVE METAL SIGN & WALL RACK
Free with Each Assortment. Contains 4 each of 6 popular types and lengths.

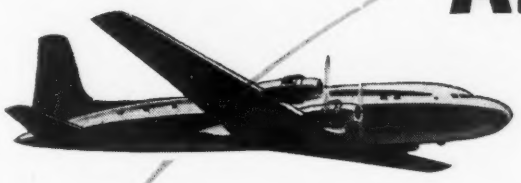
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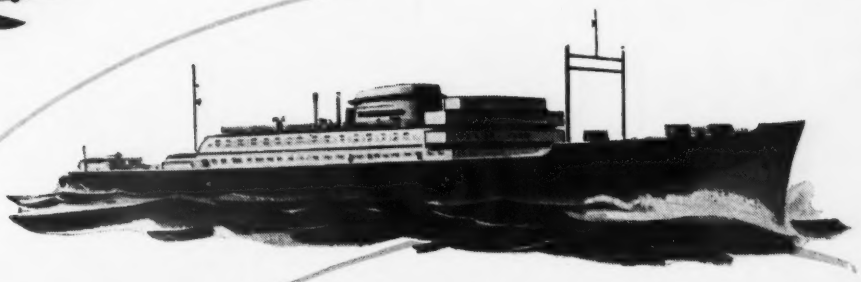


"Look, Maisie, a la mode."

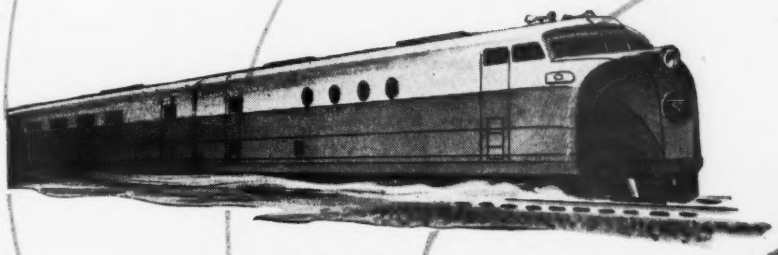
They all use PISTONS of ALCOA ALUMINUM



IN THE AIR



ON THE SEA



ON THE RAILS



with the same qualities you get in . . .

LO-EX PISTONS OF ALCOA

FIRST IN ALUMINUM

ALCOA

Buick Dealer . . . . . . (*Continued from page* 80)

theirs. The office manager and the assistants in the five departments receive annual bonuses in smaller percentage than the heads. All employes share in the annual bonus according to their length of service, efficiency, and so forth.

He had an opportunity to rent a building on the parking lot in the rear for a shell manufacturer. This building was built and used for the manufacture of shells until the war ended, when it was turned back to Mr. Harrod. It was used to start the new 6000 sq. ft. body and paint department, now one of the most important of the new departments.

"The first year of operation with the fledgling departments produced double the profit of five years' operation before the war," Mr. Harrod said, "and definitely pointed the way into the future. In succeeding years our profits were increased six times over pre-war figures."

Next expansion was in the parts department which was remodeled and restocked to care for more kinds of cars. Parts sales rose from $800 monthly to $5,000 monthly and the department served 40 dealers in 10 counties. Parts and service salesmen now watch for opportunities to promote sales in the new car department, or the new appliance department, or paint and body shop.

The result of all the interlocking activities of the department managers and employes is to broaden the range and scope of the entire operation. Particular care is taken to give adequate attention to all the wants of a customer instead of to the particular purchase at the moment.

Mr. Harrod, who naturally is a fully accredited Kentucky colonel, raises fine horses in addition to his activities in the automobile field, and ships them all over the world. He was recently featured in a four-color Gulf Oil Company page advertisement in the *Saturday Evening Post* and for this chore New York photographers flew to Frankfort where they spent several days taking color photographs emphasizing the Gulf flavor of Harrod's all inclusive automotive business.



The Gatke Grooves Show Extra Advantages

Gatke QUALITY

INTRODUCED Genuine Moulded Brake Lining for automotive use.

ORIGINATED Wire-Back Moulded Brake Block.

DEVELOPED the first patentable automotive brake lining.

PIONEERED CUSTOM-BILT Brake Lining Sets.

LED the development of Brake Blocks for Trucks, Trailers and Buses.

CHAMPIONED the correct balance between liners of primary and secondary shoes as essential to maximum brake efficiency.

INVENTED Grooved DURA-BLOK Brake Lining.

PERFECTED the Simplified Brake Survey System for Fleet Operators.

Quick elimination of dust, grit and extraneous matter . . .
Clean surfaces for uniform contact and smooth, quiet stopping . . .
Air cooling through circulation induced by the grooves . . .
Removal of water quickly restores wet brakes . . .
these are a *few* of many extra advantages provided in GATKE Grooved DURA-BLOK Brake Lining.

The Grooves also have *eye-appeal that interests car owners* and leads to discussion of other features of your service which makes more friends and brings more business.

Try it. Order a few Grooved DURA-BLOK Sets and show the liners to car owners. Explain the distinctive advantages no other brake lining offers.

Ask your GATKE Jobber or write.

GATKE CORPORATION
228 N. La Salle St. Chicago 1, Ill.

Bendix Auxiliary Vacuum Pump

A new auxiliary vacuum pump which combines a pump, an oil separating tank and reservoir in one unit weighing 8½ pounds has been announced by the Bendix Products Division, Bendix Aviation Corp., South Bend, Ind.

This pump is designed for use on gasoline engine-driven trucks and tractors, where it is claimed to maintain a high degree of vacuum even when the vehicle is operated for long periods at wide open throttle. The construction and principles of operation are similar to the larger Bendix Convac pump for diesel truck operation. It is designed to operate at 4000 rmp at maximum rated engine speed.



NOW... A PORTABLE FAST CHARGER

WEIGHS ONLY 35 LBS.

75 AMP. CAPACITY • PRICE $79.50

Slightly Higher in Far West

The new Allen Portable Fast Charger is smaller than a battery and weighs only 35 pounds. Yet it provides complete control over both high and low charging rates. A new transformer design, pioneered and perfected by Allen, plus scientific ventilation make this a real heavy duty charger that will take day in, day out use in a busy service station or garage without overheating or burning out.

LOWER COST, TOO

And the new Allen Portable Fast Charger costs less than any other type of fast charger. Larger shops can have several chargers so that one is always available. Smaller shops and fleet owners can have the added convenience of fast charging with an investment of only $79.50. Slightly Higher in Far West.

SEND THE COUPON TODAY FOR MORE INFORMATION ON THIS COMPLETELY NEW AND DIFFERENT ALLEN FAST CHARGER

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Please send more information on the new Allen Portable Fast Charger.

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CITY_____ STATE_____

Pop Helps Larry . . . . (*Continued from page* 41)

Leadfoot to make a second lap Saturday, I'd put in somethin' besides silver."

"Why?" demanded Larry.

"Because silver's hard," said Pop.

"Any dope knows that," said Larry. "That's why it can stand up under such high bearing loads without breakin' down."

"But that very same hardness," continued Pop, "is fatal when you get any dirt in the oil. It's so hard the metal and carbon particles can't sink into it the way they do in softer bearing materials like Babbitt. The first thing you know you've got scored crankshaft journals."

"We change oil every run in this job," said Larry doggedly.

"Dirt ain't the only trouble you might run into with silver. If the shaft's the slightest bit out of line, your pure silver bearings ain't gonna stand up very long. When they use silver for engine bearings they always use some other metal along with it."

"Well," said Larry, "if you know so much about bearings, what kind would *you* use?"

"I ain't no automobile designer," said Pop, "and there's a lot of technical stuff about bearing loads and rubbin' speeds I don't savvy. But, if this was my own car, and the old bearings wouldn't stand the gaff, I think I'd try a copper-lead alloy."

"Hnnh!" snorted Larry. "I just got done readin' that copper-lead bearings give you plenty of wear on the journals. And not only that, they corrode bad."

"I ain't talkin' about plain copper and lead mixtures. I mean a copper-lead alloy. That kind of a bearing won't take up the grit particles like most Babbitts. You might have to fit it with more clearance than you would Babbitt —maybe twice as much. But they'll take high loads and high temperatures. In fact, I never heard of one burnin' out altogether."

"If they're as good as all that," said Larry, "why don't they use 'em in all the cars?"

"Because for average passenger car service the Babbitt-lined bearing has a lot of advantages and

(*Continued on page* 86)

A WATCH WITH A KEY!!!



That's as Old-Fashioned as a Spark Plug with a Separate Gasket!



HUNTING A GASKET every time you change a plug is as out-dated as hunting a key to wind your watch. Edison's patented "SPUN-ON" Leakproof Gasket is just as much a part of an Edison Plug as the stem is part of a modern watch. You can't lose it. You never have to replace it. It's absolutely gas-tight. The "SPUN-ON" Gasket fits the engine block at all points because it's built into the plug. It assures more efficient cooling . . . increased power . . . complete use of gas.

This is the time of year when your customers really pile up the mileage on their cars. Give them the best of vacation driving with a new set of Edison Spark Plugs. See your Edison jobber.

THOMAS ALVA EDISON CENTENNIAL

Edison SPARK PLUGS

Edison-Splitdorf Corporation, West Orange, N. J.

PERFORMANCE AS GREAT AS THE NAME



"Will you help me, Mother? Jim's gone skeet shooting, and I bet him a dollar I could cook a skeet."



Assembly line distribution brings *mass production economies* to repair trade

TO the unexcelled quality of Monmouth Replacement Parts we add two features that save time and money for the repair man.

First, complete assemblies of these parts are packaged in distinctive, properly marked boxes.

Second, we distribute these parts with maximum efficiency through N. A. P. A. District Warehouses and N. A. P. A. Jobbers located to best serve the automotive replacement trade in each section of the country. These warehouses maintain balanced and properly proportioned inventories of all wanted parts to render the most efficient service. This is the most complete and economical method of distribution yet devised. It corresponds in economy and efficiency to the assembly lines used in the mass production of automotive vehicles themselves.

NAPA Assurance of Quality

Your NAPA Jobber is a Good Man to Know!

thus, *Monmouth* is the BUY WORD to profits in the repair trade

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FOR ENGINE BEARINGS
CLUTCH PLATES AND PARTS
CHASSIS PARTS

Monmouth Trade Mark *is the name*

Pop Helps Larry . . . . (*Continued from page* 84)

does a swell job," said Pop.

"Babbitt sure didn't help much in this crate—and *it's* a stock engine."

"It *was* a stock job," Pop corrected him. "You've probably shaved the head to boost compression and advanced the timin' and got the engine turning up a couple thousand r.p.m. faster than the engineers designed it for. And it runs at wide-open throttle for hours at a time. The original bearings wasn't designed to take all that heat and speed. But, in passenger car service, Babbitt's mighty hard to beat."

"I guess that's why I've had to replace so many bearings in my life," said Larry sarcastically.

"They go bad when they're starved for oil, or some dope tries to save a few pennies by never changin' his oil. But it's got three things in its favor. First, a bit of foreign matter buries itself in Babbitt instead of scorin' the journal. Second, there ain't a good deal of chance the journal will be scored even if the oil supply fails. And, third, Babbitt don't corrode easy.

"That's important. Lubricatin' oil sometimes gives off corrosive products when it's subjected to high heat. That's one reason why some engineers vote for Babbitt instead of copper-lead mixtures and cadmium.

"That's funny," said Larry. "I always heard cadmium made swell bearings."

"Sure they're good. Cadmium-silver and cadmium-nickel will take a lot more punishment than Babbitt. And they won't score like some other alloys."

Tommy, who had been listening intently, cleared his throat to attract attention and, when Pop glanced at him, he asked:

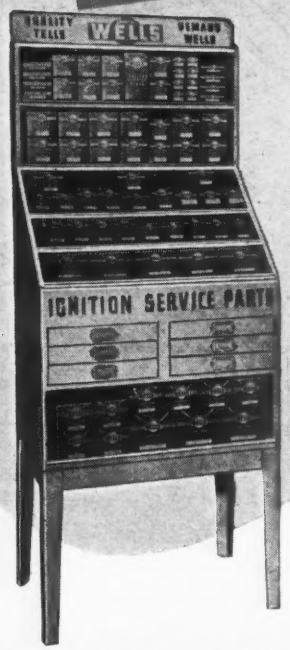
"Everytime you mention a bearing material, you say it's an alloy. Why don't they find a single metal that's good and use that?"

"It's a good idea," said Pop, "but they ain't been able to find that one metal. You see, a bearing has to do two things. It's got to be hard enough to stand up under a heavy load and it's got to be soft enough to keep from scorin'. One

(*Continued on page* 88)

WIN

...WITH WELLS



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Metal Merchandisers by Wells have display and sales value that brings sure-fire results in new business. These Merchandisers carry planned service stocks—good, well-rounded assortments of fast-moving parts to properly serve all 3 ignition systems. These Wells Merchandisers offer the most practical help to busy dealers by saving time in parts selection and ordering. With "sales helps" like these, it is easy to see why dealers are winning bigger "Tune-Up" sales volume.

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Quality Tells -- Demand WELLS



"It stalls on take-offs."

Here's BIG NEWS for Bench Grinder Users!

New 6" Heavy-Duty BENCH GRINDER

First of *Powerful,* Postwar Van Dorn Tools

This Van Dorn 6" *Heavy-Duty* Bench Grinder is a brand new tool with all the power and work capacity you've come to expect from the famous Van Dorn line! And there are more postwar advances on the way!

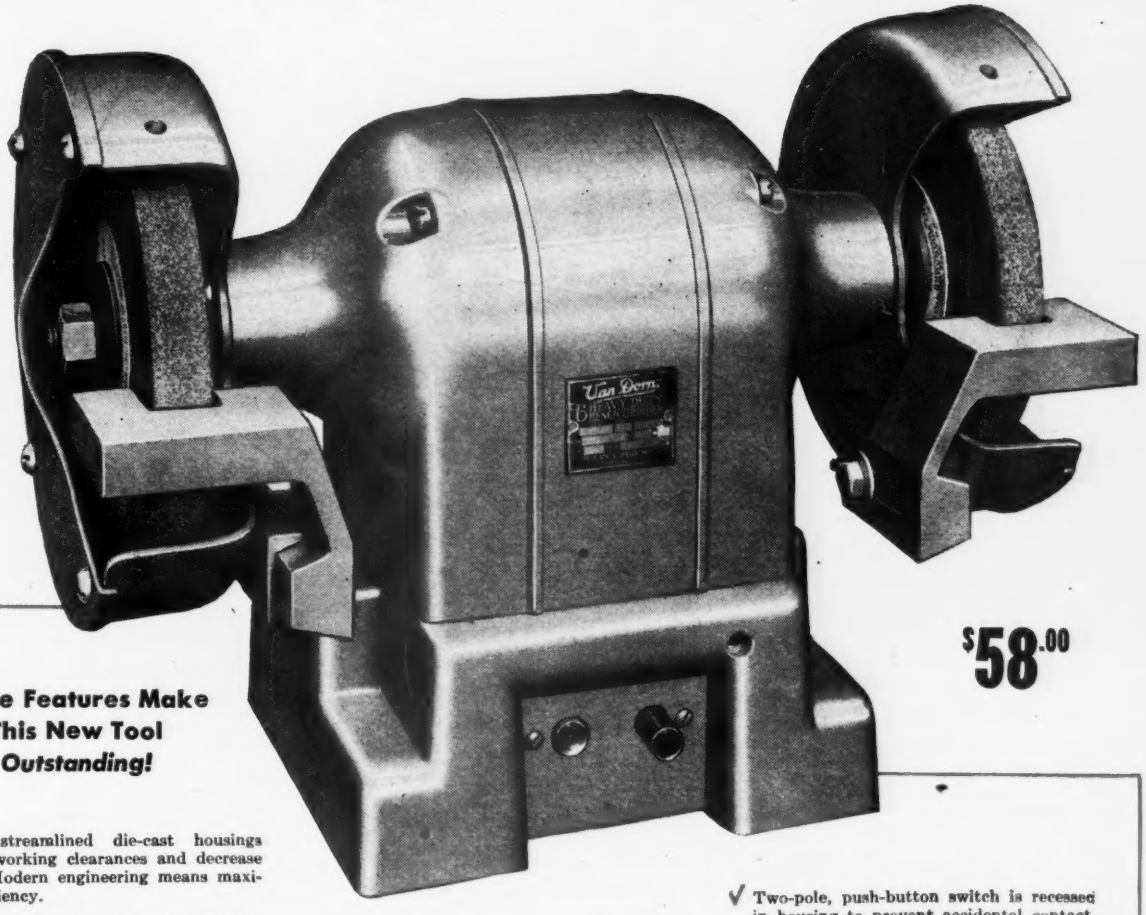
Put one of these handy Bench Grinders to work in your shop and it will soon pay for itself and cut costs on grinding, wire brushing, buffing, burnishing, polishing, finishing and tool sharpening jobs—cleaning parts, removing carbon, rust, scale and corrosion. We've outlined a few of this new tool's outstanding features below. Your nearby Van Dorn Distributor can give you more detailed information. Ask him about this Bench Grinder today. And write for your free copy of our catalog to: The Van Dorn Electric Tool Co., 727 Joppa Road, Towson 4, Maryland.

FOR POWER SPECIFY

"Van Dorn"

(DIV. OF BLACK & DECKER MFG. CO.)

PORTABLE ELECTRIC TOOLS



$58.00

These Features Make This New Tool *Outstanding!*

- √ Modern streamlined die-cast housings improve working clearances and decrease weight. Modern engineering means maximum efficiency.
- √ Powerful "constant-speed" motor, built by Van Dorn, mounted on ball bearings, maintains high operating speed under load.
- √ Wheel guards and covers made of steel to give extra protection. Ample room for standard three-section wire wheel brush without changing the guard.
- √ U-shaped tool rests fit around grinding wheel for improved support in tool sharpening. Adjustable for wheel wear.
- √ Machined hole in base of Grinder provides for mounting attachments.
- √ Two-pole, push-button switch is recessed in housing to prevent accidental contact, yet remains easy to reach.
- √ Standard equipment includes two 6" grinding wheels; medium grade for rough, fast work . . . fine grade for finish grinding and tool sharpening.

Pop Helps Larry . . . . (*Continued from page* 86)

metal can't be both, so they've got to use two metals."

"Babbitt's got more than two metals in it," said Larry, determined to show off the learning he had so recently acquired from an instruction book.

"What kind of Babbitt are you talkin' about?" asked Pop.

"What kind? Why there's only one."

"I wouldn't let anybody who knowed anything about automobiles hear me say that," said Pop. "You can get almost any kind you want. And every kind is made to act different. Take S.A.E. Ten and S.A.E. Eleven. Number Eleven's got less tin and more copper and antimony than Number Ten. That makes it softer. And there's still softer grades—and harder ones."

"I wonder why it was ever called Babbitt metal," said Tommy. "The only other Babbitt I ever heard of was a character in a book."

"It was named after Isaac Babbitt," explained Pop. "He's the guy who figured out how to make bearings by linin' a steel shell with a softer material."

"Well," said Larry, "he didn't help me much. I've still gotta replace them bearings. There ain't no use of Leadfoot takin' this crate out on the track like it is."

Pop looked at him narrowly. "Where did you ever run into this race driver?" he asked.

"Oh, me and him went to school together," said Larry.

"It was a nice friendship while it lasted," said Pop.

"Leadfoot can't blame it on me if he loses."

"I didn't mean that," said Pop. "If he knows as much about race drivin' as you knowed about bearings when you started to work on his car—well, he'll never live long enough to go on social security."

JOHNSON BRONZE



Excellent

Delivery

New and enlarged facilities plus the return of many of our skilled employees from the services means more bearings for you. Now you can get excellent delivery, particularly on our F-B Series.

The Johnson F-B Series of Bearings are uniform, high quality products made to the same exacting standards as original equipment. They are easy to sell . . . easy to install . . . and deliver exceptional performance. Why not check your needs NOW?

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Write for your FREE copy of our latest complete automotive catalogue.

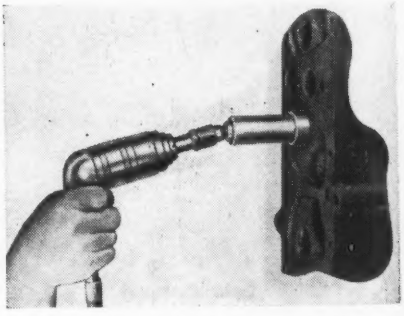
JOHNSON SLEEVE BEARING BRONZE HEADQUARTERS

The Most Complete Sleeve Bearing Service in the World

455 S. MILL STREET NEW CASTLE, PA.

Air Power Valve Seat Grinder

A 4/10 hp air motor has been added to the line of "Knock-Out" Valve Seat Grinders, according to an announcement by the K. O. Lee Company of Aberdeen, South Dakota.



This air motor, manufactured by the Aro Equipment Corp., operates on 80-90 lbs. air pressure and its speed is variable from 1500 to 17,000 rpm. Its small size and pistol grip make it possible to use in tight corners without the use of flexible or angle drives.

Due to its variable speeds, this unit may be used for other operations, such as drilling, sanding, buffing and hand grinding.



One of the most reliable parts of an engine is the AC Fuel Pump, heart of the fuel system. That's because it's *first quality* in design, material, and manufacture,—built to meet the engine maker's own requirements.

Serve your customers best, and protect your own reputation, by replacing worn pumps with new or factory-rebuilt AC's, and making repairs with authentic AC Parts Kits or Diaphragm Kits.

QUALITY FEATURES

- **Careful control of pressure and flow assuring correct fuel supply.**
- **Accurate hardening, precision machining of parts essential to long life.**
- **Accurate control of spring tensions and temper.**
- **High, and controlled, pin hardness.**
- **4-layer, patented-impregnation diaphragms of special airplane cloth.**
- **Carefully finished rocker arm pads, located to center on cam.**
- **Split-hair rocker arm clearance and control of pad hardness.**
- **Uniform pull rod hardness at pin holes.**

AC FUEL PUMPS

SEND FOR AN AC PUMP SHOP MANUAL

Field Service Department, AC Spark Plug Division, G. M. Corp.
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Gentlemen: Please send at once, no charge, the AC Shop Manuals checked:

☐ How to Service Spark Plugs ☐ HOW TO SERVICE FUEL PUMPS
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☐ How to Service Oil Filters ☐ How to Service Speedometers
☐ How to Service Ammeters and other Instruments MA-7

NAME_____
FIRM_____
STREET ADDRESS_____
CITY_____ STATE_____

Carter Carburetors . . . (*Continued from page 45*)

determined by the additional force necessary to continue to move throttle lever. Relocate pump travel gauge and turn knurled nut until finger again touches top of plunger shaft. Observe number indicated on gauge. Hold gauge vertical to insure correct pump stroke readings. The difference in the two readings obtained should be "21" (21/64 in. plunger travel).

Adjust by bending throttle connector rod at lower angle (F)

NOTE: It is advisable, before taking pump gauge readings, to practice opening throttle several times to find position at which increased throttle resistance indicates plunger bottoming in cylinder.

Pump Jet Adjustment:—Good acceleration performance at low speeds depends primarily on the gasoline discharged from pump jets. Each of the two streams must be directed to its proper section of the dual venturi system. In order to obtain maximum efficiency, each stream on the 609S carburetor should strike within a 3/16 in. diameter circle, the center of which is 11/64 in. from the opposite wall of the bore and ¼ in. inward from the primary venturi strut (see Fig 2).

Later production carburetors have these targets marked, but it will be necessary to measure in order to establish them on early production units. Do not scratch venturi, a pencil mark will suffice.

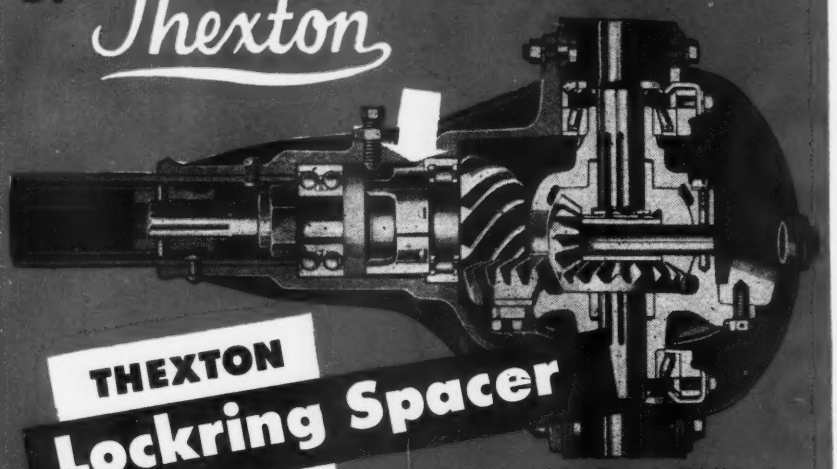
Only a slight bend will be necessary to properly aim the pump jets.

Metering Rod Adjustment:—(Fig. 3). Back out throttle adjusting screw until throttle valves seat in bores of carburetor. Insert one metering rod gauge T109-163 on 609S and T109-152 on 608S in place of either metering rod. Press down lightly on vacuum piston link (A) until lug of piston link (D) contacts lip of metering rod arm (C). There should be less .005 in. clearance between metering rod bearing (B) and shoulder in notch of metering rod gauge. Adjustment should be made by bending lip of metering rod arm (C). Use bending tool T109-105.

(*Continued on page 92*)

HERE'S A NEW TIME SAVING PROFIT MAKER

BY Thexton



THEXTON
Lockring Spacer
FOR CHEVROLET PINION SHAFT

L-1 for Chevrolet '33-'35 with ball-bearing type pinion shaft.

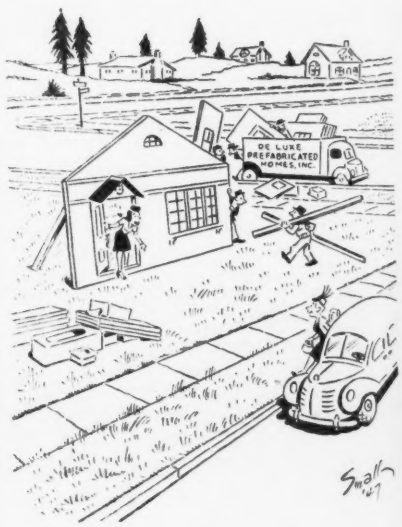
L-2 for Chevrolet '35-'42 with roller bearing type pinion shaft.

Save time—save trouble on Chevrolet pinion shaft bearing installations with the Thexton lock ring spacer. Puts troublesome lock rings in position without fuss. Gives a bigger profit margin on shorter job time. A simple effective method of installing Chevrolet front pinion bearings without removing the rear axle housing or using cork, tape, hose or other makeshifts to hold lock ring in place. Order from your jobber today.

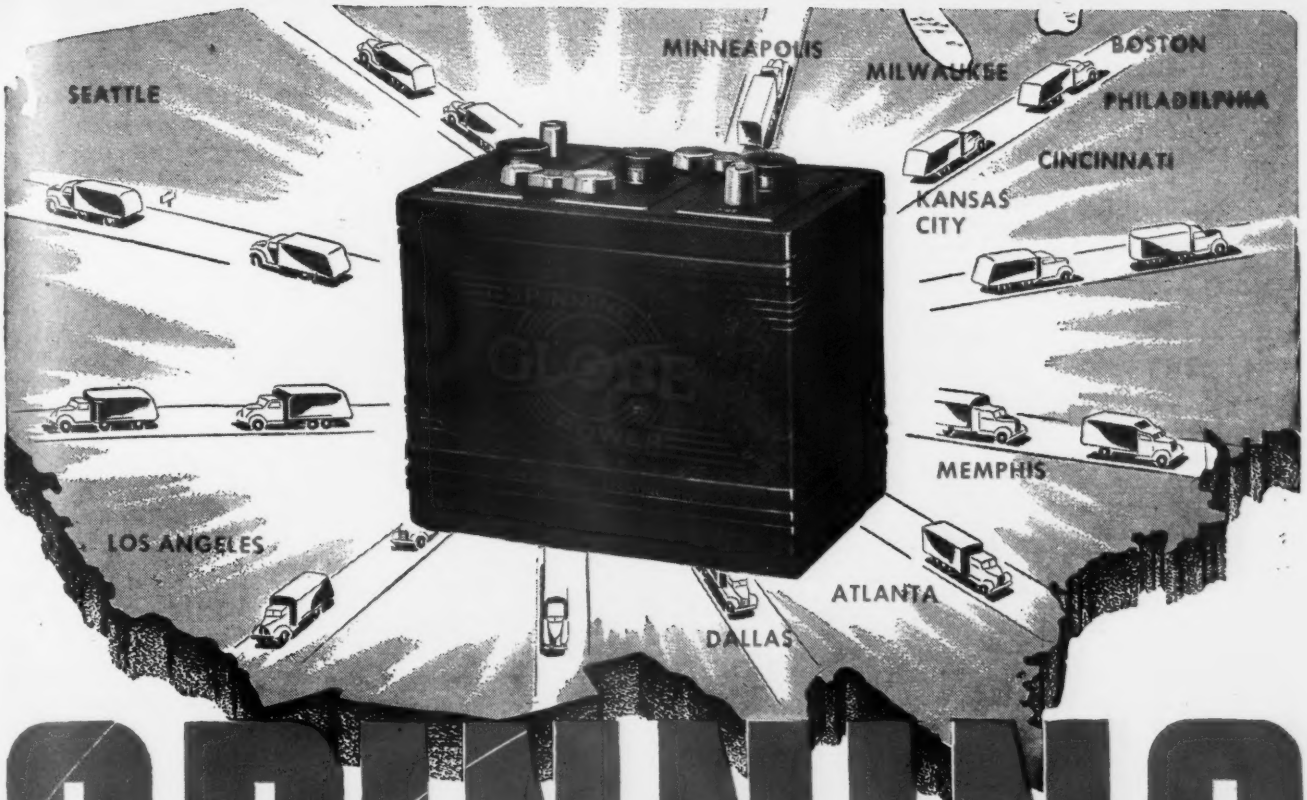
1 Low cost—saves time and labor
2 Install without removing rear axle housing
3 Stationary—nothing to wear
4 No interference with oil circulation
5 No pressure against bearing
6 No foreign matter in lubrication

THEXTON
MANUFACTURING COMPANY, INC.
Established 1907
1313 WINTER STREET . . MINNEAPOLIS, MINN.

SUPPLYING JOBBERS COAST TO COAST



"We're still on the assembly line, Jennie, but come on in."



SPINNING POWER

KEEP CHECKING THOSE BATTERIES! This essential service wins friends, keeps your customers' cars rolling, pays dividends in cash and good will. Replacement batteries are scarce, so — complete, regular battery service is a MUST.

GLOBE-UNION

GLOBE-UNION INC.
MILWAUKEE 1, WISCONSIN

Carter Carburetors . . . (*Continued from page* 90)

Unloader Adjustment:—(Figs. 4 and 5) Two adjustments are necessary for correct unloader setting:

A. Loosen choker lever and screw assembly on choker shaft (H). Insert .020 in. feeler gauge (T109-29) between lip on fast idle cam and boss on flange casting (K). Hold choke valve tightly closed (G) and tighten choker lever and screw assembly in place on either model.

B. Adjust unloader lip on throttle shaft lever (P) until there is 3/16 in. clearance between upper edge of choke valve and inner wall of air horn (N) with throttle valve held in wide open position. Use gauge T109-28.

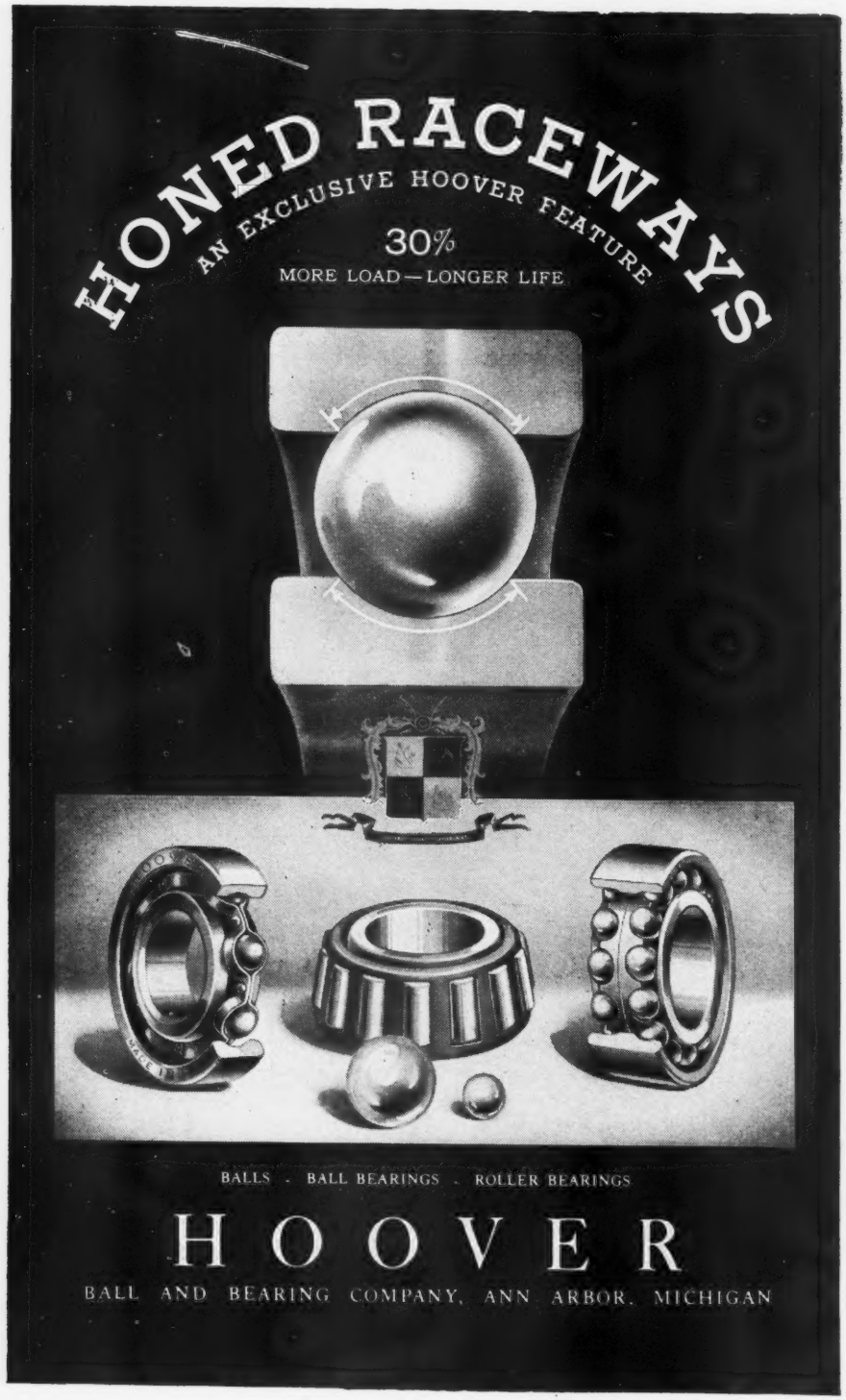
Fast Idle Adjustment:—(Figs. 4 and 5) With choke valve tightly closed (G), adjust fast idle set screw (L) to give .018 in. on 609S and .012 in. on 608S clearance between throttle valve and bore of carburetor (side opposite port). Be sure fast idle adjusting screw is on high step of cam (M) when making this adjustment.

Starter Switch Instructions and Adjustments

The Carter car starter is incorporated as an integral part of the carburetor. A steel ball (1-Fig. 6) rests in a milled groove in the throttle shaft. When the throttle is opened with the motor stopped, the ball is forced against the plunger (2) which moves bakelite guide (3) and contact spring (5) (shaped like the letter W) upward until it makes electrical contact between two brass inserts molded in the bakelite terminal cap (8). This is the switch in the solenoid circuit which operates the cranking motor.

When the engine starts, the manifold vacuum acts on the steel ball and as soon as the foot throttle is released, the ball is forced upward away from the shaft, spring (7) pushes the contact spring downward, thus breaking the circuit. The ball is forced upward to its seat in the casting and remains in the upper position as long as the motor is in operation. Any additional operation of the throttle does not cause

(*Continued on page* 94)





"It's a green sedan with my wife talking in the back."

How to Start an Endless Chain of Profits!



Every time you sell a Fram filter you start *an endless chain* of sales and profits on Fram replacement cartridges. And Fram filters are easy to sell because 50% of all cars on the road are not filter-equipped. So just ask each motorist who drives in, "How's Your Oil Filter?" and when he answers "I don't know"—*find out*. That way you'll sell plenty of genuine Fram replacement cartridges, too, because one out of three cars *with* filters need cartridges right now and the rest will within six months. That makes filters and cartridges your greatest unsold market—so get in the Fram "New and Old Car" Campaign and cash in! Fram Corporation, Providence 16, R. I. *In Canada:* J. C. Adams Co., Ltd., Toronto, Ontario.

FRAM'S "NEW and OLD CAR" CAMPAIGN STILL GOING STRONG!

FREE!

"YOUNGSTER" & "OLDSTER" MASKS



ASK YOUR FRAM JOBBER FOR DETAILS

FRAM

Oil & Motor Cleaner

Cleans the Oil that Cleans the Motor

Carter Carburetors . . . (Continued from page 92)

switch to again make contact until the motor is stopped, which will allow ball to drop to its starting position.

The W shaped contact spring (5) rests on two or more square brass shims (4). These are very important because they determine the degree of throttle opening at which the switch contact is made. Contact should be made when throttle valve is opened between 30 degrees and 45 degrees. If not enough of these shims are in place, contact will not be made soon enough.

If there are too many, the switch will begin to function too soon (before 30 degrees) and in that case there is danger that the switch may be in contact during fast idle operation.

In disassembling the switch, extreme care must be taken that none of these shims are lost and they must all be returned to their proper position. It is always desirable to use Carter Car Starter Gauge T109-155 (Fig. 8) after the switch parts have been reassembled, and if any new part has been installed, it is absolutely essential that it be used to make certain that the contact **is not** made before 30 degrees and **is** made before 45 degrees throttle opening.

Make sure that throttle lever set screw and fast idle adjusting screw have been backed out to allow throttle valves to set when setting protractor gauge pointer to zero. Also be sure to set pointer on the scale marked "WCD."

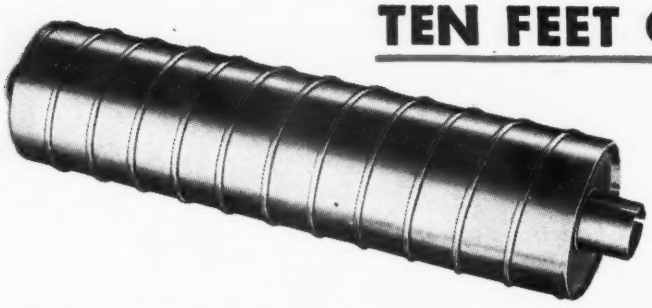
Above the W shaped contact spring (5) will be found a cylindrical spring (7). Between these two there is a round washer (6) with a square hole which must not be confused with the shims. *CAUTION:* Springs (5) and (7) must never be stretched or altered in any way or the operation of the switch will be affected.

To remove the throttle shaft from carburetor it is necessary to first remove complete starter switch. Never put oil or grease on any switch part as it will collect dust and eventually stick.

In making the electrical connection, the red or "hot wire" should always be attached to the terminal screw extending toward the engine.

ONLY PRATT HAS THE SPIRAL RIB

You can SEE it's a quieter muffler TEN FEET OFF!



No other muffler gives you a visible external feature that you can point to and say "This makes it a BETTER muffler!"

Yes, that rigid 4-ply spiral backbone reinforces the heavy steel shell of Pratt Mufflers from end to end. It holds down vibration, cuts "muffler-flutter", a major cause of muffler noise. When customers *see* and *feel* Pratt's spiral rib they get the point *fast!* No involved engineering sales-talk necessary.

Pratt Mufflers are better *inside*, too. No baffles to set up excessive back-pressure. Instead, self-cleaning scoops dig into exhaust stream and swoop gases *directly* into silencing chambers. Carbon and goo swoosh out with the gases, can't lag behind to clog. Pratt Mufflers stay clean.

Get all the facts on the muffler you can SEE is quieter, the muffler that cuts selling time to the bone. Write Pratt today for name of jobber near you.

From Mississippi to Atlantic . . .

IT'S PRATT FOR QUICKER SALES

2922

Sold only through jobbers

PRATT Spiral MUFFLERS

Pratt Industries, Inc. • Frankfort, N.Y.

In Canada: PRATT CHUCK CO., Ltd. • Toronto, Ont.



"No, Mam, the drive-in theater is two blocks down the street."

When you're glad you have a Snap-on



A few hammer blows remove the tightest hub when you use a Snap-on UNIVERSAL WHEEL PULLER

Because interchangeable jaws adapt it to all demountable wheel hubs, including Ford cars, there is just ONE Snap-on Universal Wheel Puller Set to buy.

The patented pressure screw drive is known to be the fastest, safest, and most efficient method of pulling any hub. The interchangeable jaws pivot and swing around the housing flange to any desired bolt circle and provide a direct leverage regardless of their working angle.

Available through Snap-on's nation-wide, direct-to-user tool service. Ask your "Snap-on Man" for a demonstration when he calls.



SNAP-ON TOOLS CORPORATION

8036-G 28th AVENUE • KENOSHA, WISCONSIN

International Division: Kenosha, Wisconsin, U. S. A.

Small Shops . . . . (*Continued from page* 48)

the average mechanic learns as his trade. It is more than a matter of "going to the bank" when things look tough and "paying back" when things look easy.

Wise borrowing at the right time will pay the shop owner many times the small percentage which he is charged for the money. And borrowing at the wrong time can put the owner into the worst kettle of fish known to .any businessman. Many banks now have an expert in the problems of small business. It is good sense to know this man. Most banks are glad to show their prospective customers the most favorable methods of presenting figures for loans. They are interested in doing business. The banker is expert at recognizing good financial deals and can give very sound advice on financial matters. The shop owner should find a banker whose ability he admires and whose integrity he trusts, then give him all the facts which he can master. In this way he can get the full benefit of the professional's skill at finance and perhaps he too can gain a new customer at the same time.

In addition to banks, many communities have community development funds which will supply long term credit which banks are often reluctant to give. The Department of Commerce offers general advice on the problems of finance through its field offices and its publications. The public accountant who handles the shop's books and tax returns can often give the answer to financial problems. It is no disgrace for a small shop owner to get the best advice he ean. No man knows all the answers.

Selling is the third important division in any business. Each of these divisions is so important that over any length of time no business can succeed if it is weak in one of them. Many small shop owners depend upon their own friends and the word of mouth selling which these friends do for them. This is a fine approach to the selling problem and the owner should constantly be increasing his circle of friends.

In any area, however, many potential customers would not be reached by this method. Consequently the owner should be on the

(*Continued on page* 98)

CENTRAL *ALLSIZE* HOSE CLAMP COMPLETELY UNIVERSAL

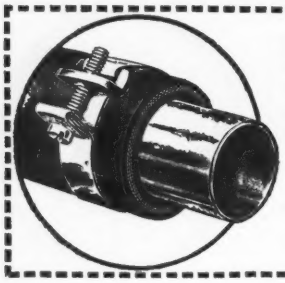


THIS ONE LENGTH CLAMP SERVES ANY SIZE HOSE UP TO 3 INCH O.D.!

This popular *ALLSIZE* has been serving thousands of jobbers and dealers for many years!

THE *ALLSIZE* UNIVERSAL CLAMP IS PREFERRED BECAUSE

- Vibration won't loosen it—won't cut through hose!
- Costs less! Economical, can be used again and again!
- Minimizes your investment—stock one size only—fits any hose!
- Can be taken off or put on without disconnecting hose!
- Unlimited take up—completely universal—the preferred clamp!



CENTRAL EQUIPMENT CO., 1020 W. Adams St. Chicago 7, Illinois

Without obligation please send me FREE SAMPLE of the CENTRAL *ALLSIZE* Universal HOSE CLAMP and descriptive literature. (734.)

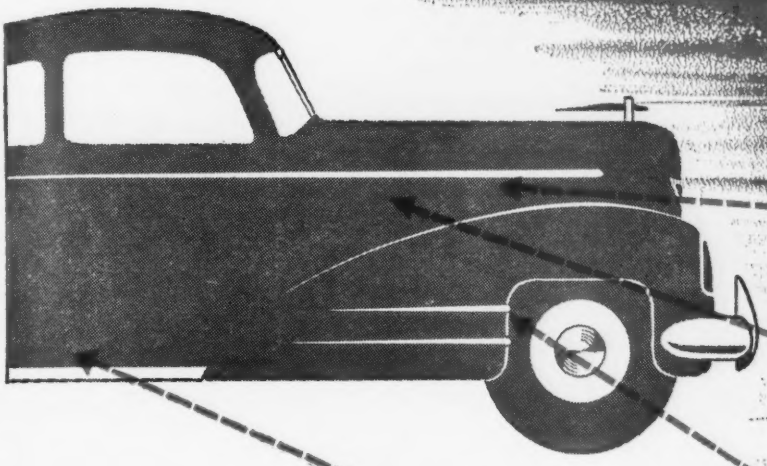
Name .....

Address .....

City ..... State .....



For a Single Replacement or Complete Overhaul... there is a HIGH QUALITY PERMITE Replacement Part



For Dependable Service... Install PERMITE PARTS

- WATER PUMPS
- WATER PUMP REPAIR KITS
- PISTONS
- PISTON PINS
- VALVES
- VALVE GUIDES
- VALVE STEM KEYS
- VALVE SPRINGS
- CYLINDER SLEEVES AND ASSEMBLIES
- SPRING SHACKLES
- TIE-ROD ENDS
- BOLT SETS
- BUSHINGS
- MUFFLERS AND CLAMPS

An important factor in all automotive service work is the selection of replacement parts that are engineered to fit right and perform right.

Permite Replacement Parts always meet car and truck manufacturers' specifications. Permite's engineering exactness and quality control, through every step of production, pay off in superior parts performance under the toughest operating conditions. The high quality and mechanical precision of Permite Parts have made them the preferred replacement in service shops throughout the nation. Play safe. Reinforce your own good workmanship by using Permite Parts for cars, trucks, buses. There is a Permite Jobber near you.

ALUMINUM INDUSTRIES, Inc.
Cincinnati 25, Ohio

PERMITE

REPLACEMENT PARTS

Small Shops . . . . . (Continued from page 96)

alert for anything which will attract these people to his shop. Without their patronage he is doomed to remain a very small shop indeed. For them the most appropriate types of advertising—newspaper, direct mail, radio, and so forth—can be employed. A wealth of material on selling is available. Just as Ed Hevner takes up the philosophy of selling power in detail in his trade journal experienced articles, other salesmen present other men's ways of promoting sales.

In addition to trade journals another good source of advice on selling is the jobbers who supply the shop. Most of them belong to Trade Associations, like National Standard Parts Association or Motor and Equipment Wholesalers, which urge their members to help the small shops in their localities. These organizations are very interested in the volume of small business, because manufacturers and suppliers can exist only if healthy small business keeps buying from them.

In general trade journals, Trade Associations, and the Department of Commerce are good sources of information on problems national in scope but which will apply to any small repair shop. Local banks, local accountants, and other local sources, are good for information on particular problems.

Many communities now have started organizations, staffed by local experts who know local problems. These groups offer night courses, or business clinics, to raise the standard of business activity in the town. More towns are following the successful plans of the leaders. And although nothing may seem duller than going back to school, a year of nightwork isn't such a bad investment if it will pay off in a lifetime of better business.



Whiz Mirror and Glass Finish

Whiz Mirror and Glass Finish has been added to the line of chemicals sold through automotive channels by the R. M. Hollingshead Corporation of Camden, N. J.



Originally developed for aircraft use, this product has heretofore been marketed by the Household Products and Industrial Divisions of Hollingshead. No spray equipment is used, the liquid is merely applied, let dry and wiped off. It is being sold in one pint and one gallon cans.



Inspection...
FOR GLASS REPLACEMENT BUSINESS

When cars come into your shop for repairs of any kind, take a glance at the glass. Call the owner's attention to any cracked or discolored windshields or windows. Point out the hazards of driving with poor visibility and offer to do a quality glass replacement job.

Correction...
with Glass that assures Better Visibility

Whether you do the replacement job yourself or send it out, be sure that the stenciled identification "L·O·F Hi-Test Safety Plate" is visible after installation of the new glass. It tells the customer that you have used top-quality glass. L·O·F Hi-Test Safety *Plate* Glass is made of two panes of plate glass, ground and polished for maximum freedom from distortion and laminated with a sheet of clear, tough plastic.

If you do the work in your own shop ask your L·O·F Distributor to keep you stocked with the most-used part numbers. If you send replacement jobs out, choose a shop that uses genuine L·O·F Safety *Plate* Glass. Libbey·Owens·Ford Glass Company, 5877 Nicholas Building, Toledo 3, Ohio.



WHEREVER VISION IS IMPORTANT
USE L·O·F *Polished Plate* GLASS

L O F

LIBBEY·OWENS·FORD
a Great Name in **GLASS**

WHAT A FIGURE!



100 Million

Yes 100 Million!

That's the number of readers who see and learn all about LEAK-PROOF Piston Rings through LEAK-PROOF's magazine advertising. Think of it! All America knows LEAK-PROOF Piston Rings —knows what they do—knows how to get them installed.

LOOK AT THIS LIST!

LEAK-PROOF is advertised regularly in the following publications:

MONTHLY MAGAZINES

Progressive Farmer
Successful Farming
Holiday
Country Gentleman

WEEKLIES and BI-WEEKLIES

Saturday Evening Post
Liberty
Collier's
Look

SUNDAY NEWSPAPER MAGAZINES

American Weekly
Parade
This Week

Reaching over 100% of all the car owners in America!

YOU CAN'T MISS WITH LEAK-PROOF A New PRODUCT

THIS MEANS BIGGER and BETTER BUSINESS for YOU

Yes LEAK-PROOF

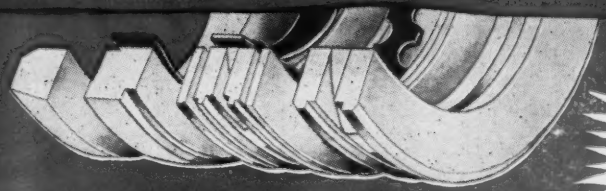
REG U.S PAT OFF

PISTON RINGS

THE RINGS THAT GIVE YOU ALL 4

1. Keep oil down
2. Keep power up
3. Give smooth, new motor operation
4. Give longer life





ALSO GIVE YOU THE TRADE'S MOST POWERFUL-AGGRESSIVE ADVERTISING BACKING

AND THEY'RE GUARANTEED

. . . guaranteed to give satisfactory performance for 10,000 miles or one year, whichever shall occur first, under the McQuay-Norris LEAK-PROOF Piston Ring Replacement and Labor Guarantee available upon request.

OF McQUAY-NORRIS MANUFACTURING CO., ST. LOUIS, U.S.A.

Adjusting Regulators . *(Continued from page 57)*

brought back up, in order to make sure that the adjustment is correct.

Point opening (Fig. 2), is measured with a feeler gauge and is adjusted by bending the upper armature stop.

The voltage regulator unit requires two checks and adjustments; air gap and operating voltage. The air gap is checked by pushing the armature down until points just barely touch and then measuring the gap between the armature and the winding core Fig. 4. Adjust, if necessary, by loosening the contact mounting screws so that the contact bracket can be raised or lowered. Be sure to align points carefully when retightening screws.

The voltage setting may be checked by either the variable or the fixed resistance method. With the fixed resistance method, disconnect the regulator "BAT" lead and connect a ¾ ohm resistance (1½ ohm for 12-volt unit) between the "BAT" terminal and the regulator base (Fig. 5). Connect a voltmeter between these same two points. With the regulator at operating temperature, the cover in place, and the generator operating at medium speed, note the voltage setting. To adjust, remove the cover and bend the lower spring hanger of one spring Fig. 6. Bend up to lower the setting or down to increase it. After each adjustment, replace the cover, reduce generator speed and then bring the generator up to medium speed again before taking the reading.

With the variable resistance method, connect an ammeter and ¼ ohm variable resistance in series into the charging circuit at the regulator "BAT" terminal, and connect a voltmeter between the "BAT" terminal and the regulator base Fig. 7. Proceed as with the fixed resistance method, but also adjust the variable resistance until the ammeter reads between 8 and 10 amperes when the voltage reading is taken. After making any voltage regulator adjustment, readjust the variable resistance to return the charging rate to 8-10 amperes.

The current regulator unit requires two adjustments, air gap and current setting. The air gap is

(Continued on page 104)

THE

ATOM BOMB

MIGHT **BREAK A**

HULBERT *Smash-Proof* TRADE-MARK **CREEPER**

BUT . . .



. . . NOT A CAR!!

LEADING JOBBERS STOCK

Smash-Proof CREEPERS and CASTERS

HULBERT MANUFACTURING CO.

ASHTABULA, OHIO



"Let's check it again . . . if you had fifteen apples and ate thirteen . . ."



"Ten Strike"

It's the *easy* way to sell—

Oil Filters and Elements

Oil changes

Here's all there is to do:

Wipe the dipstick on an AC Oil Test Pad. Show the dirty Pad to the customer, while you're showing him the oil level. (The dirt, grit, and sludge stand out plainly.) Then, recommend that he have an AC Oil Filter installed, or his element replaced, because dirty oil clogs ring slots, gums valves, and accelerates carbon formation. Clean oil saves engine wear and repair expense, and AC Oil Filters and Elements keep oil clean.

You'll make a "strike" nearly every time if you use AC Oil Test Pads, regularly, to sell AC's high efficiency Oil Filters and Elements.

AC SPARK PLUG DIVISION • GENERAL MOTORS CORPORATION

AC Oil Filters

HOW TO GET AC OIL TEST PADS } **Register as an Official AC Oil Filter Service Station with Your AC Wholesaler**

Adjusting Regulators . (*Continued from page* 102)

checked and adjusted as on the voltage regulator Fig. 4. To check the current setting, some means must be used to prevent the voltage regulator from operating since this would prevent operation of the current regulator unit. Three means of doing this are available; jumper lead, battery discharge, and load.

With the jumper lead method, connect a jumper lead between the voltage regulator points and an ammeter into the charging circuit. Turn on lights and accessories to prevent high voltage and increase generator speed until the current regulator operates. Regulator should be at operating temperature. Adjust by bending hanger of one spring Fig. 6, up to lower and down to increase the setting.

When using the battery discharge method, crank the engine for 30 seconds with the ignition off, then start the engine, turn on lights and other accessories, and check the current regulator setting.

When using the load method, connect an electrical load approximating the current regulator setting across the battery. This load may consist of a carbon pile or a bank of lights, and it prevents the voltage from increasing enough to cause voltage regulator action.

If regulator contact points have become dirty or oxidized, they will cause excessive resistance in the generator field circuit with a resultant low generator output. The points may be cleaned with a clean, fine-cut contact file. A spoon or riffler file will be required to clean out any slight cavities or pits that have formed. Never use sandpaper or emery cloth to clean points. Particles of emery or sand will be embedded in the points and cause them to burn rapidly.



Optimus Aluminum Cleaner

A new metal cleaning compound especially designed for cleaning aluminum, designated as Optimus No. 101A, is now in production by the Optimus Detergents Company, 124 Water St., Matawan, N. J.

This cleaner is a combination of medium duty alkaline cleaner, water softening materials and inhibitors. It is designed for removing dirty grease and oil. It can also be used as a soak cleaner for ferrous metals, die castings, brass, bronze and pewter. In this application the work can be made the cathode and cleaned electrically.



"The union decided it takes two to do the job . . . too much walking for one man."

Powerful drive!

DAYTON FAN BELTS
NOW MADE WITH *Rayon*



That's right, Mr. Dealer! When you install a *Raytex* Fortified* Dayton Fan Belt, you can be sure your customer's car is safeguarded by the fan belt that is designated as *Original Equipment* by manufacturers of 85% of all American makes of cars.

Dayton's service to you doesn't stop with customer satisfaction. With Daytons you get the advantage of the exclusive, simplified numbering system that makes inventory easier *and makes it possible for you to service 91.8% of your passenger car and light truck trade with only 12 belt sizes!*

If you haven't already checked into Dayton Fan Belts, call your Dayton Jobber, or write direct to: Dayton Rubber, Dayton, Ohio.

**Dayton Processed Rayon Cord*

Dayton Rubber

REG. TRADE-MARK THE DAYTON RUBBER MFG. CO.

THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

Aligning Jeeps . . . . . *(Continued from page 62)*

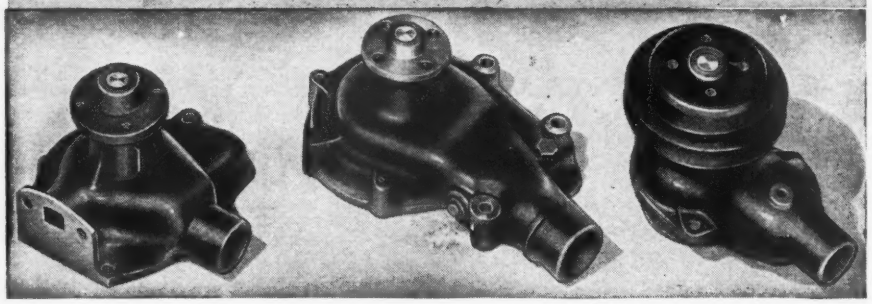
The factory states that the caster angle should be 3 degrees, but there is no method provided for adjustment other than by installing new parts. However, if the camber and toe-in are correct yet the vehicle is still hard to straighten out after a turn to either side the condition can be corrected by installing a wedge between the spring and the axle pad.

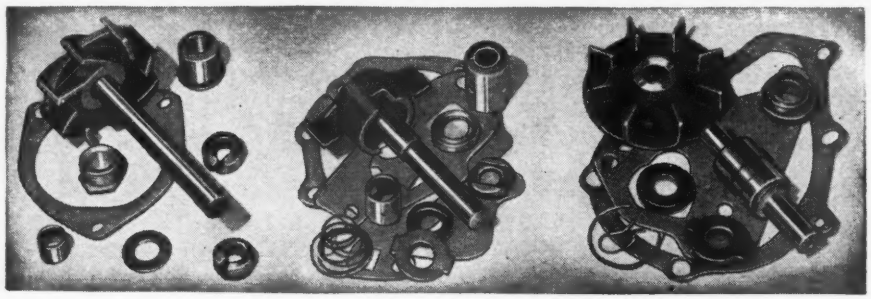
Front wheel turning angle or toe-out should be 20 degrees for the inside wheel and 18½ degrees for the outside wheel. These dimensions are controlled by the length and angularity of the steering arms in relation to the front axle. The left spindle arm controls on a left turn, the right spindle arm controls on a right turn. If test equipment shows that the angles are not correct, it is probably because one of the steering arms is bent. If the bend is not excessive, the part may be straightened while cold but if it is badly bent it should be replaced.

It is possible for the bell crank to become bent or otherwise damaged, in which case it should be replaced. A tapered locking pin holds the bell crank mounting shaft, the crank, and the two needle bearings on which it swivels, to the frame bracket. By driving the pin out, the assembly is readily released.

The steering knuckle oil seals protect the universal joints and the steering knuckle bearings. It is essential that they be in good condition. If there is any sign of leakage the seals should be replaced. This is easily done by removing the four screws holding each half-seal in place. Before installing a new seal, examine the spherical surface of the axle housing for scores or scratches which might damage the seal. Roughness of any kind can be smoothed down with emery cloth. The felts of the two halves of each seal should abut firmly at installation.

Dependable Quality
WATER PUMPS and REPAIR KITS





- **Finest Quality line of Pumps and Repair Kits . . . . all interchangeable with original equipment.**
- **Also available — complete line of Parts, Supplies and Accessories.**
- **Immediate Delivery on most items.**



Send for Catalog

New 1947 catalog of our complete line now available.

LION AUTO PARTS and MFG. CO., Inc.
1920 S. MICHIGAN AVE.
CHICAGO 16, ILLINOIS

Studebaker Hydraulic Speedvises Offered

Two new foot operated hydraulic Speedvises, incorporating V-ways and gibs are announced by the Studebaker Machine Co., 1221 So. 9th Ave., Maywood, Ill.

Featured in this unit is the elimination of hinging action under pressure, accomplished by the gibs set at a 45 degree angle in the V-ways. No outside power source is required, the foot pump being capable of exerting pressures up to 7½ tons. Speed of the jaw action can also be controlled.

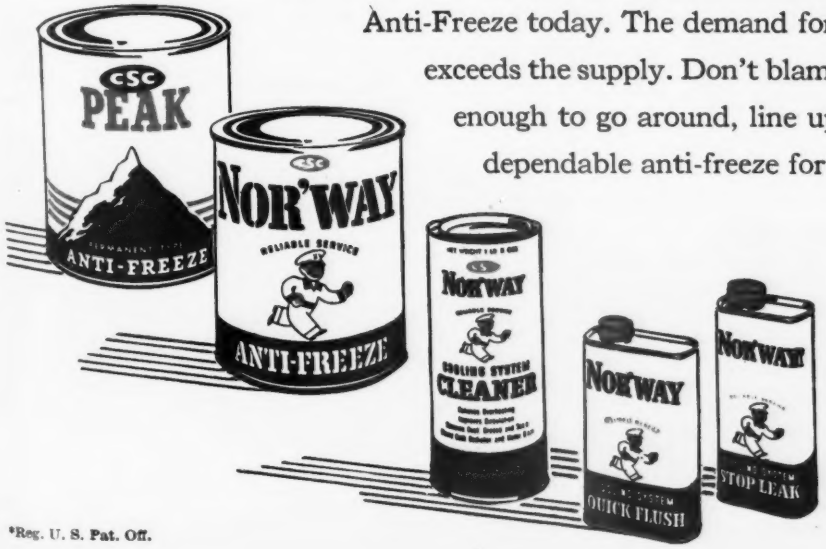
Two models are available: The No. 750 "Torpedo," having 7½ in. maximum jaw opening, 4½ in. jaw depth, 5¼ in. jaw width, 7½ ton maximum jaw pressure, and the No. 500 "Bullet" with 5 in. maximum jaw opening, 3 in. jaw depth, 4½ in. jaw width and 5 ton maximum jaw pressure.



TRAINED BEAR SPEAKS ENGLISH!

WHEN he talks, car-owners listen with a NOR'WAY look in their eyes. He's putting on a show for you—a part of CSC's Fall NOR'WAY advertising campaign to help you make sales. Watch for him in the national magazines.

Get ready for your NOR'WAY Fall Radiator Service now. Order your NOR'WAY Cooling System Chemicals and your PEAK* and NOR'WAY* Anti-Freeze today. The demand for PEAK and NOR'WAY still exceeds the supply. Don't blame your jobber. If there's not enough to go around, line up your share of Ajax*—the dependable anti-freeze for over twenty years.



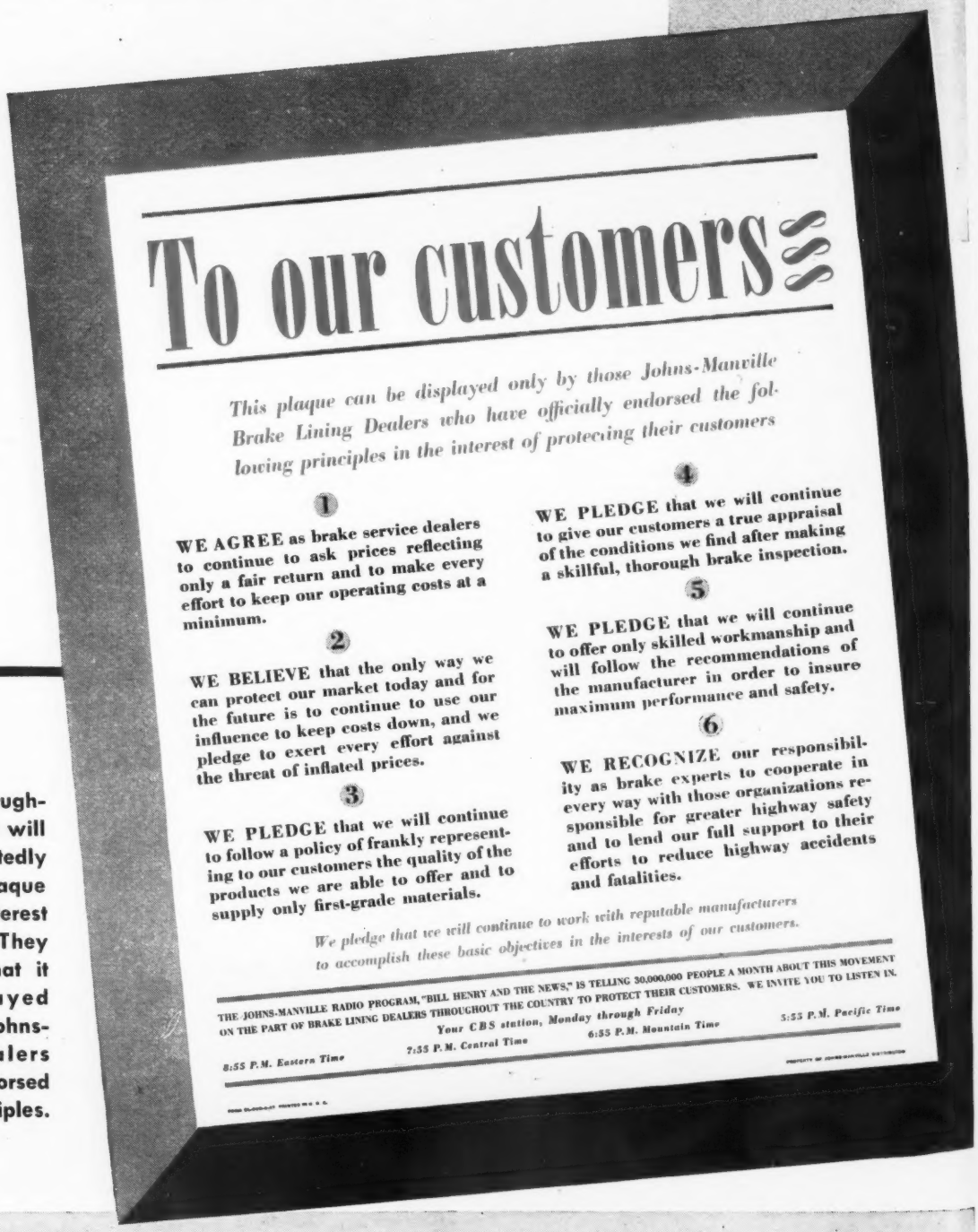
*Reg. U. S. Pat. Off.

CSC

Specialties Division
COMMERCIAL SOLVENTS CORPORATION
17 East 42nd Street, New York 17, N.Y.

Johns-Manville launches

Radio Audience of 30,000,000 a month will hear regular messages featuring dealers who endorse this set of principles



Car owners throughout the country will be urged repeatedly to look for this plaque in their own interest and protection. They will be told that it will be displayed only by those Johns-Manville Dealers who have endorsed this set of principles.

nation-wide public relations program for Brake Service Dealers

This nation-wide public relations program has been developed in its entirety as YOUR program . . . to build public confidence and consumer acceptance for YOUR services

THROUGH THE MEDIUM of the Johns-Manville Radio Program . . . with the largest weekly listening audience of any program on the air . . . car owners will be directed to look for the plaque containing the dealer's declaration of square dealing (shown on opposite page).

In a survey of dealers, they told us that this public relations program was vitally needed to help offset skepticism and buying resistance on the part of car owners . . . assuring the car owner of fair-dealing from you as an identified reliable source.

These millions of listeners on 64 CBS Stations from coast to coast will hear quotations from the sound business principles you have endorsed as shown on the plaque. A complete merchandising program will back up those dealers who endorse this plan. In addition to the plaque this plan includes attractive, attention-getting signs and displays to identify you as a Johns-Manville dealer who has been repeatedly recommended to the vast radio audience.

The outstanding J-M radio program will be the platform from which your story of fair-dealing will be told. Every brake service dealer, conducting his business according to the sound principles outlined in this program, should have all the facts. This public relations and merchandising program is being launched in the interest of *you* and the entire industry. Get in touch with your Johns-Manville Brake Lining Distributor today or write to Johns-Manville, Box 290, New York 16, N.Y. for complete details.



PROPER IDENTIFICATION of the J-M Brake Service Dealer is important. This public relations program will tell car owners, by radio, to look for this blue and yellow metal sign (at right) . . . and the animated electric "Stop and Go" sign (at left) will help catch the eye of passing motorists.





BILL HENRY AND THE NEWS, the Johns-Manville radio program heard 5 nights weekly over 64 CBS stations.



• BRAKE LININGS • BRAKE BLOCKS • CLUTCH FACINGS

Clearing House . . . . *(Continued from page 60)*

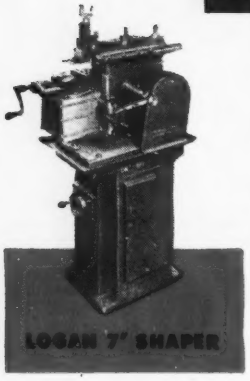
tery and tried to start the car with the battery in the car, but it still would not start on 6 volts. We left the ignition hooked up to a separate 6-volt battery and hooked up 12 volts to the starter, the engine started and ran O.K. We shut down and hooked everything up to 6 volts as it should be normally and much to our surprise, the car started and ran fine, and ever since it starts better and runs better than any time since the owner bought the car new.

I don't know what was wrong, or what we did, but something was sure off the beam. Can you explain to us just what was wrong, and what took place? It is too deep for any of us to figure out.—Raymond G. Karnuth, First Street Garage, 330 N. 1st St., Olean, N. Y.



LASTING ACCURACY

Another Reason Why More Industries Every Year Use Logan Lathes



The ability of the Logan Lathe to work to closest tolerances after years of usage results from advanced design and precise construction methods. The Logan ball bearing mounted spindle, for example, is constant in its accuracy through all speed ranges and under all operating conditions. Headstock bearing faces are held to an accuracy of .0005". Total spindle run-out 12 inches from the bearing is less than .0008". Bed ways are within .0005" of parallelism. Rugged, massive construction is combined with these precision standards. Vital points of the lathe are protected by self-lubricating bronze bearings. It is this careful building that gives the Logan Lathe its lasting accuracy. Full information on Logan Lathes and Shapers on request. U-2

SPECIFICATIONS COMMON TO ALL LOGAN LATHES . . swing over bed, 10½" . . . bed length, 43⅛" . . size of hole through spindle, 25/32" . . spindle nose diameter and threads per inch, 1½"—8 . . . 12 spindle speeds, 30 to 1450 rpm . . . motor, ½ hp, 1750 rpm . . . ball bearing spindle mounting . . . drum type reversing motor switch and cord . . . precision-ground ways, 2 V-ways and 2 flat ways.

DISTRICT OFFICES: Woolworth Bldg. New York 7, N. Y. Cortland 7-8024 • 550 W. Washington Blvd. Chicago 6, Illinois Central 1246 • 1672 Mission Street San Francisco, Calif Underhill 6682

LOGAN ENGINEERING CO. CHICAGO 30, ILLINOIS

THAT is a most interesting problem you have had on the 1938 Plymouth. Since receiving your letter we have been doing a lot of high-powered guessing here, but none of us is willing to lay any money that we are right. One of our men here believes that the trouble is a bad coil. Another one guessed that the trouble is a bad ground and my personal guess was that you had a load of bad gasoline in the car which you finally worked out and now the car operates satisfactorily.

It's an aggravating problem because you will never know definitely just what the trouble was and, of course, it's always possible that there were several things wrong with the set-up that combined to cause the trouble. I can see that the possibility of some bad contacts in the wiring is worth considering. By disconnecting and connecting the various batteries you might have eliminated the trouble.

From the angle of the coil being defective, I know that coil testers sometimes leave something to be desired and that a coil might not operate on 6 volts because it was damp but here again I would not bet any money.

In regards to defective fuel or even kerosene in the tank instead of gas, I think this is the best solution and the one on which I'd put my money. I can see that after the kerosene had been used up and the supply replenished with standard gasoline, the car would then operate satisfactorily on the regular 6 volts.

Is there any chance that you changed the starting cable? Some cables, as you know, have fairly high resistance so that the voltage is cut down going to the starter. If you happened to replace with a better quality cable, one having less resistance, that might account for your trouble, but you do not mention having made such a change in your letter.

However, these are only guesses and that's all anyone can do on a screwy piece of trouble such as you had.

I will be interested to learn any other details which you might not have mentioned in your original letter.

Fleet owners find that it pays to standardize on

SEALED POWER *Heavy Duty* PISTONS

...they serve better, longer



RUGGED INTERNAL CONSTRUCTION
assures long life in heavy duty service, with extra material added for correct heat transfer and extra strength.

FINEST ALUMINUM ALLOY NO. 132
is used exclusively in Sealed Power Heavy Duty Pistons.

CAM GRINDING
assures correct shape and increased bearing area at operating temperatures.

T-SLOT DESIGN
assures lower and more uniform temperature throughout piston.

SEALED POWER PISTON RINGS

KEEP YOUR WAR BONDS! GET $4 FOR $3!

IT WILL PAY YOU TO SPECIFY SEALED POWER HEAVY DUTY PISTONS

SEALED POWER CORPORATION

MUSKEGON, MICHIGAN • IN CANADA: STRATFORD, ONTARIO



SOMETHING EXTRA

IN BRAKE SERVICE, TOO

PURITANIZE*

When your customer's brake fluid is low and requires a shot or two to bring it up, you can take care of him with Puritan Hydraulic Brake Fluid.

But if you want your customer to be sure of complete brake safety — for a long time to come—you'll suggest something extra—a *Puritanize job—a thorough cleaning out of dirty, gummy, overworked brake fluid with Puritan Hydraulic Brake Flushing Fluid and a replacement with fresh, active, Puritan Brake Fluid.

And Puritan Hydraulic Brake Flushing Fluid makes this flushing job easy to do, and profitable too. Once through the line and the system is thoroughly clean. Then a filling of Puritan Brake Fluid and your customer is assured of many miles of safe braking.

Just tell your NAPA jobber you want to do *Puritanize jobs. Let him send you fast-acting Puritan Hydraulic Brake Flushing Fluid and Puritan Hydraulic Brake Fluid.

*PURITANIZE . . . TO BRAKE SAFETY



1. Clean hydraulic brake line with fast-acting Puritan Hydraulic Brake Flushing Fluid.



2. Refill with non-gumming, all-"miscible" Puritan Hydraulic Brake Fluid.



PURITAN COMPANY, INC.

NAPA Assurance of Quality

ROCHESTER 6, NEW YORK

HYDRAULIC BRAKE FLUID AND FLUSHING FLUID • GASKA-SEAL NO. 1, 2 AND 3 SHOCK AND KNEE-ACTION OIL

New G.M.C. Truck Models

(*Continued from page* 53)

The new Diesels are available in two basic types: The "750," using the GM 4-71 four-cylinder engine and the "900," "950" and "970," using the GM 6-71 six-cylinder. Both engines are of the two-cycle, direct fuel-injection type. Several changes have been made for their installation in the new models. The oil strainer has been dispensed with, while larger oil coolers with additional plates have been provided to increase cooling and decrease restriction. The cast iron oil pump gears have been replaced with steel gears, and the oil pan has been changed to a deep sump design to maintain lubrication on grades upward of 25 per cent.

Other engine changes include redesigned cylinder liners, higher-delivery fuel injectors and modified blowers. Horsepower ratings have been increased by 21 per cent on both engines.

Chevrolet Announces New Truck Models

(*Continued from page* 53)

equipped with four-speed sliding gear transmissions. The latter models have provision for power take-off, an optional feature on the smaller trucks.

Except on the ½-ton models, the line features the familiar full-floating hypoid rear axle, although the ratings of the heavy-duty single reduction and two-speed axles have been increased to 13,000 pounds on the tires and the rear tread on the smaller trucks has been increased to allow wider bodies. Hotchkiss drive is standard on all models execpt the 3100 Series, the latter employing torque tube.

The increased-size cabs are mounted at three points, using two tension and shear mountings at the front and a shackle at the rear along with two stabilizing rubber bumpers. This design is said to counteract chassis vibration and frame weave.



"Out where the tall corn grows" . . . where you can "see it grow" . . . and even, on a still night, "hear it grow"—that's America's breadbasket area of midwestern states, where no one would dispute, the corn is World's Finest.

And there are no finer automotive parts in all the world than

Genuine TOLEDO

For almost a half century Toledo parts have been proving their exceptional worth from Coast to Coast in every type of automotive vehicle. So it is no wonder that thousands of "America's Men Who Know Motors" continue to specify Toledo. For parts from Toledo's factories, which are standard equipment in so many new cars, trucks, buses and tractors lead the field in replacement preference.

The TOLEDO

STEEL PRODUCTS COMPANY • TOLEDO, OHIO, U.S.A.

SINCE 1906

Makers of Fine Automotive and Aircraft Parts

Legally Speaking

A lawyer's interpretation of federal and local court decisions of interest to repairmen and car dealers

Can't Exclude Competition

Can local businesses be protected from outside competition by state laws or town ordinances? Apparently not to any great extent, according to a decision by the Court of Appeals of Maryland.

There, it appears, that a Maryland town passed an ordinance prohibiting solicitors and other transients from soliciting orders and selling merchandise within the town limits unless licensed by the town. The same ordinance exempted representatives of local business houses from the license requirement.

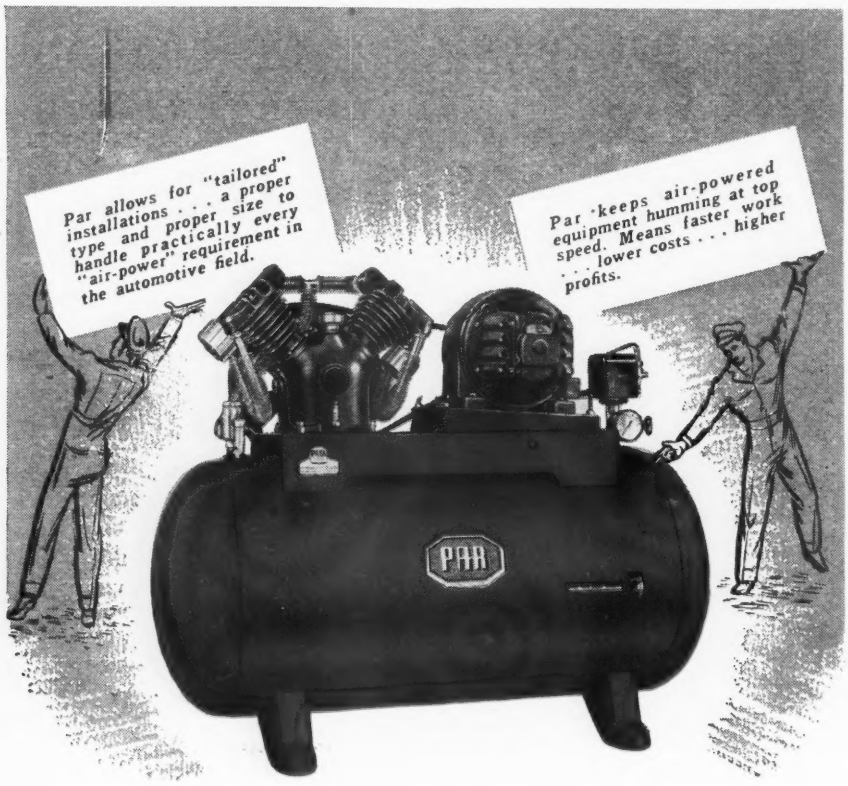
A solicitor for a company located in the District of Columbia undertook to solicit orders in this town and was arrested by the local authorities. He was informed that he and all other representatives of his company would be arrested on every occasion on which they attempted to serve old customers or secure new ones in the town.

Deciding the case in favor of the outside company and its representative, the court said:

"The ordinance is void because it discriminates against a non-resident in favor of the resident business, and this violates the fourteenth amendment of the Federal Constitution. If the local merchant, in response to whose complaint such ordinances are passed, would be rid of such competition, he must submit to the same penalties, burdens and conditions as he would have imposed on the intruders."

The court referred to numerous cases along the same line in other states, indicating that local laws intended to exclude outside competition, particularly from another state, are not likely to hold water in court. (*Jewel Tea Company vs. Town of Bel Air, 192 Atlantic Reporter, 417*).

(*Continued on page* 116)



There are no *lulls* or *letdowns* in your service operations when your air-powered tools and equipment are powered by a proper size, proper type Par. The Par line offers a wide range of models and size for individual "tailored" installations . . . with Par you fit the unit to the job . . . you always have plenty of air, it costs less, your compressor lasts longer, and it makes your service work more profitable. Ask your Par jobber about the 1947 Par compressor line or write for illustrated catalog of details and specifications.

The new 1947 Par air compressor catalog tells you in simple form how to determine the proper size and proper type compressor to handle your air requirements efficiently. See your Par jobber or write for your copy today.

. . . By Comparison — You'll Buy PAR

Lynch Manufacturing Corporation

General Offices, Toledo 1 • Factory, Defiance, Ohio, U.S.A.



"He's a factory man. Gets paid for recording the 'Ohs' and 'Ahs' and 'Nuts' when customers see the new designs."

Super-safe



Super-ads

Wherever you turn . . . newspapers . . . magazines . . . outdoor posters . . . you'll see Sid Hoff's famous cartoon characters building super-sales and profits for you and **Super Pyro** in new super-safe **Super Pyro** super ads.

New hard-hitting newspaper ads — new four-color ads in Collier's and The Saturday Evening Post — new four-color outdoor posters . . . reaching 258,322,412 readers . . . each featuring super-safe **Super Pyro** . . . with new anti-freeze protection . . . new anti-rust defense . . . new freedom from odor . . . in the big purple-and-gold can!

So play it super-safe yourself and call your jobber now to get **Super Pyro's** super sales and profits this year!



AMERICA'S FASTEST-SELLING ANTI-FREEZE

Copr. 1947
U. S. Industrial Chemicals, Inc.

Legally Speaking . . . (*Continued from page* 114)

Customer Trips Over Box, Shop Owner Pays Damages

What's the legal liability of a repairman for injuries suffered by a customer who falls over an obstruction on a floor intended for the use of customers?

In a recent court case a woman sued the owner of a store for injuries sustained by her when she fell over a box placed in a narrow aisle which afforded the only access to a section of the store where she desired to make purchases. At the trial the owner of the store contended that the customer was at least partly to blame because she was negligent in not looking where she was going as she walked through the store. Upon the trial court's deciding this contention in favor of the store, the woman appealed. The higher court reversed the decision and returned the case to the lower court for a new trial.

The following comment of the court is well worth the attention of every repairman:

"There is a substantial difference between the kind and degree of vigilance which a traveler on a street must exercise to avoid damage and that which is required of a customer in a business place. The businessman expects and intends that his customers shall look not at the floor, but at the items which he displays to attract their attention and which he hopes they will buy. He at least ought not to complain if they look at the things displayed instead of at the floor to discover possible pitfalls, obstructions or other dangers, or if their purchases so encumber them as to prevent them from seeing dangers which might otherwise be apparent. Patrons are entitled therefore to rely to some extent at least upon the presumption that the proprietor will see that the passageways provided for their use are unobstructed and reasonably safe." (*Chalmers vs. Great Atlantic and Pacific Tea Company, 192 Atlantic Reporter, 419.*)



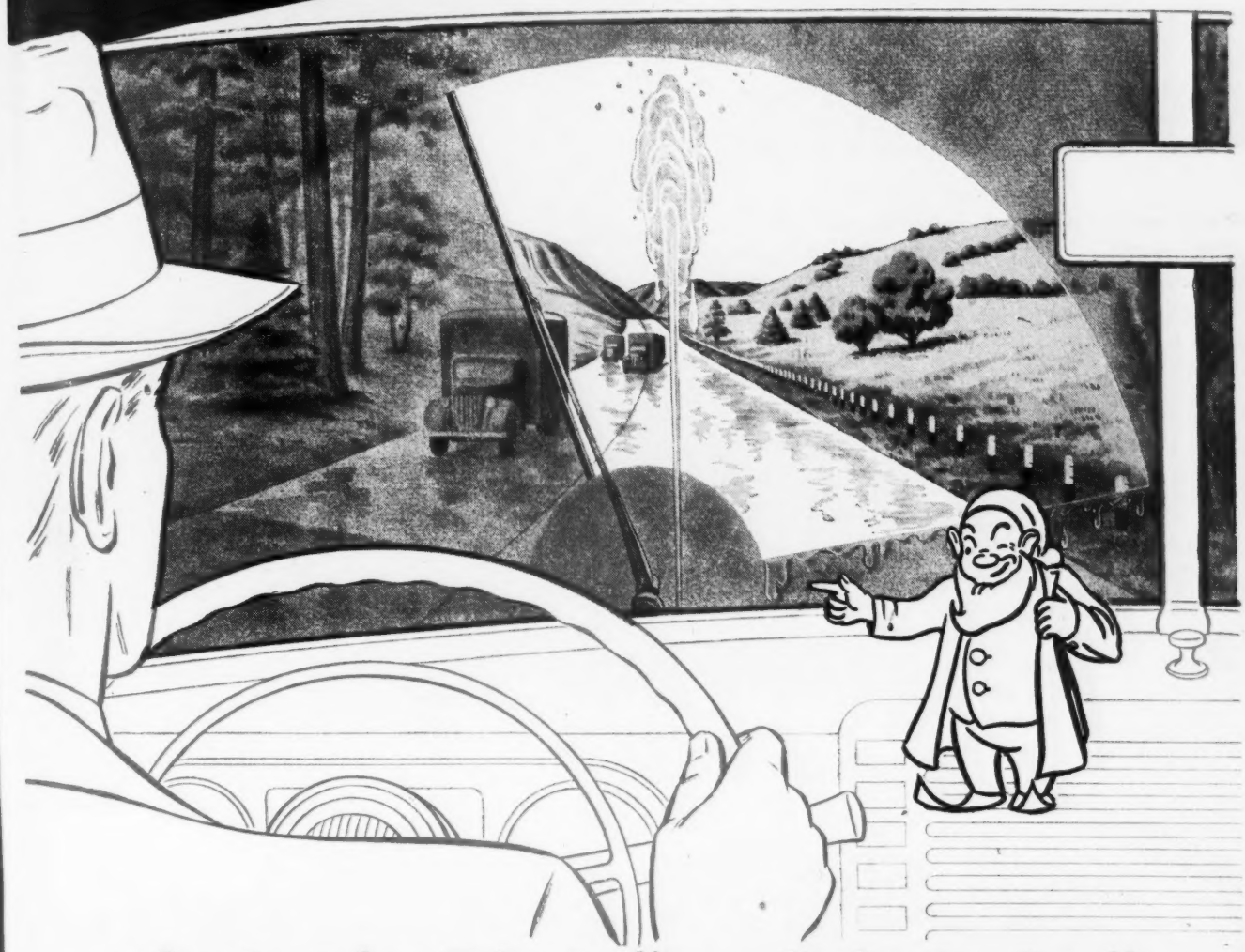
Trade Associations Can Enforce Rules On Members

The action of a trade association "turning on the heat" to eliminate evils in the trade has been held in (*Continued on page* 119)



"One thing about Pop, he's a good provider."

DRIVERS SEE 3 *times as clearly* 3 *times as far*



...that's why Trico's "two little Squirts" are selling by the thousands



IT'S easy to install the Trico Washer. It's easy to sell them... to new car owners and old... to truck owners *by the fleet.* Checkups show that 90 per cent of all windshields are dimmed with road grime nearly 100 per cent of the time.

Through advertising in the *Saturday Evening Post, Life, Collier's, Time, Country Gentlemen,* Trico is showing millions of motorists how to have safe, clear vision at ALL times... at a modest price... by installing a Trico Washer.

Thousands of dealers join Trico in telling owners "where to buy" with listings under the Trico trademark in the classified pages of phone books... and by displaying Trico service signs.

TRICO *Windshield Washers*

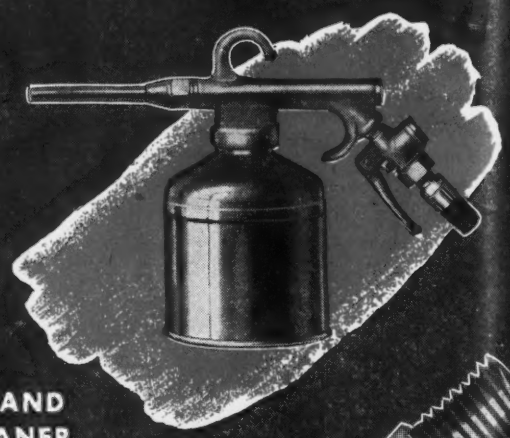
TRICO PRODUCTS CORPORATION, BUFFALO 3, N. Y.

A STATION is known by the SERVICE IT RENDERS

● Pick out any successful service station and back of that success you will find the biggest contributing factor was, and still is, Service . . . backed up by thoroughly modern equipment. Hansen automotive equipment has been tried and tested by thousands of service stations from coast to coast.

The Hansen Sand Blast Cleaner is used for removing carbon from parts, paint and rust from bodies and fenders, and a wide variety of jobs. To operate, connect unit to airline, press trigger and immediately sand is blasted against work.

The Hansen Automotive Coupling is the most widely used hose coupling in the field and is used in the operation of car lifts, grease guns, spring sprays, blow guns and in many other places. Easy to operate...a slight movement of the sleeve is all that is required to connect and disconnect. Complete swivel action prevents kinking of hose.



HANSEN SAND BLAST CLEANER



HANSEN AIR HOSE COUPLING

HANSEN AUTOMOTIVE AIR LINE EQUIPMENT



HANSEN JET OILER

The Hansen Jet Oiler is the most popular oiler on the market. It is manually operated and projects a solid jet of light or penetrating oil when plunger is depressed. All pump parts are enclosed in the handle, affording ample protection from dust, dirt and breakage. Container has a capacity of one quart.

Send for Automotive Catalog

REPRESENTATIVES

New England States:
A. D. GEIGER, Belmont, Mass.

Eastern, Southern States:
B-R ENGRG. CO., Baltimore, Md.

Northern Ohio:
F. & W. URSEM CO., Cleveland, O.

Southern Ohio, West Va., Ky.:
STEINHAGEN AIRLINE PRODUCTS, Dayton, O.

Northern Ill., Eastern Iowa:
NORRIS ENGRG. CO., Chicago, Ill.

Indiana, Wisconsin:
NEFF ENGRG. CO., Ft. Wayne, Ind.

Central Western States:
JOHN HENRY FOSTER CO., St. Louis, Mo., Minneapolis, Minn.

Western, Southwestern States:
BURKLYN CO., Los Angeles, Calif.

Northern Calif., Nevada:
H. E. LINNEY CO., Oakland, Calif.

Michigan:
WM. H. NASH CO., Detroit, Mich.

THE HANSEN MANUFACTURING COMPANY

1786 EAST 27th STREET • CLEVELAND 14, OHIO

Legally Speaking . . . (*Continued from page* 116)

a recent Federal decision not to violate the Sherman Act.

Manufacturers of women's garments organized an association for the purpose of preventing so-called "piracy" of dress designs. The members of this association agreed among themselves not to sell to a merchant who bought from a manufacturer who pirated dress designs. A large department store brought an action against this association on the ground that it violated the Sherman Act, but the Federal Court did not think so. The court felt that the Sherman Act did not prevent the members of an industry from combining to do away with evils in the industry detrimental to the industry as a whole. Apparently, the same principle could be applied in any trade or industry. Similar ends have been accomplished in a number of trades and industries by the formulating of a fair trade code under the auspices of the Federal Trade Commission.

Manufacturer'sResalePrice Is Binding Upon Retailer

State laws forbidding a dealer to undercut the resale price fixed by the manufacturer have real teeth, as a New Jersey case shows. The New Jersey Act was attacked as being unconstitutional, but the highest appellate court of that State upheld the law and in its decision said:

"The law is a mere direction to a resident merchant that he must not resell trade-marked or branded articles at less than the price fixed by the producer or owner of such marked commodities. If the merchant would profit by the good will built up by the owner or producer, he must comply with the requirements of the statute. He may remove the mark or brand and sell the goods he owns at his own price, but he must not utilize the good will of another without complying with the statute which brands as unfair the sale of identified goods at less than the price fixed by the producer.

"The intent of the law," commented the court, "is not to prevent a resale of merchandise but a destruction of the producer's good will often established at great cost."

With the decline of government price controls, the fixing of resale prices by manufacturers may become more prominent under state laws and the Federal Fair Trade Act. *(Johnson and Johnson vs. Weissbard, 191 Atlantic Reporter, 873.)*

Even One-Sided Contracts Bind Both Parties

A manufacturer made a contract with a distributing concern whereby the distributing organization became the sole channel of distri-



bution for certain of the manufacturer's products. Both parties were corporations, and the contract provided that it was to be effective as long as both corporations existed.

The distributing company, however, was to have the right to end the contract by giving notice to the manufacturer; but the manufacturer was not given the right so to end the contract. In a subsequent lawsuit between the two companies, it was urged that the contract was not binding because of this inequality in the rights of the two contracting parties.

Dismissing this point, the court said:

"It is argued that the agreement lacked mutuality. This is not so. What is meant is that one party had the privilege of ending the contract on notice while the other did not have the same right. Stated in another way, the obligations of the parties were not commensurate. These parties, both business concerns, agreed upon this element of the contract and it suited them. Certainly we may not say it was unreasonable."

This decision simply states the common sense principles that a business contract may be binding and effective even though it be one sided and seems unduly to favor one of the parties to the contract. *(Phoenix Hardware Company vs. Paragon Paint and Varnish Company, 192, Atlantic Reporter, 45.)*

Goodrich Tubeless Tires Now Undergoing Tests

Tubeless tires—goal of tire manufacturers since the opening of the automotive era—have been developed by the B. F. Goodrich Company and are now undergoing all known tire tests, it was announced here recently.

The new tire, perfected after more than three years of engineering, combines the safety features of puncture-sealing inner tubes with improved riding qualities, high bruise resistance and remarkable ability to retain air pressure, according to James J. Newman, vice-president. The tubeless tire embodies rayon cord construction.

In addition to undergoing a high-speed road testing program in the Southwest, tubeless tires are in service on a taxicab fleet in a mid-Western city, on state police cars and a number of privately-owned passenger cars, Newman said. The tubeless tire will be offered only for limited sale at this time, the company stated.



3 Good Reasons for Installing NEAPCO'S SPLIT RING

HEAVIER RETAINING RINGS . . .
These heavier rings give this time-tested design greater torque capacity than ever. There is ample strength to carry the higher torques developed in the latest cars. To your customers it means greater satisfaction.

HARDENED and GROUND BEARINGS . . .
Hardening and grinding the bearings to closer tolerances reduces wear, adds longer service life to this Joint.

Neapco's Split Ring has received customer acceptance for nearly a generation; this improvement is a step toward even greater approval through longer service life.

INCREASED PRODUCTION . . .
Through increased production facilities more of these popular Joints are being manufactured than ever. Sizes in production for most Ford and Chevrolet passenger cars.

At Your Neapco Jobber's

America's most complete Independent Line of Universal Joints & Parts

NEAPCO

NEW ENGLAND AUTO PRODUCTS CORP., POTTSTOWN, PA.



"I'm Kilroy. Will it take me where I want to go?"



You satisfy customers every time you use sure-sealing Armstrong-Victor Cork Gaskets. Made of live, resilient cork, they provide oil-tight joints even between surfaces that are somewhat rough and pitted.

You can count also on fast, easy installation with Armstrong-Victor Cork Gaskets. They always fit the parts they're made for. Bolt holes always line up. That's because these gaskets are made by the Armstrong Cork Company with an exclusive anti-shrink, anti-stretch binder.

On your next job, use Armstrong-Victor Cork Gaskets. They come in convenient, clearly labeled packages for all popular makes of cars, trucks, buses, and tractors. For a complete listing, ask your jobber for Victor Gasket Guide No. 14. Or write today to Victor Manufacturing and Gasket Company, 5750 Roosevelt Road, Chicago 90, Illinois.

LOOK FOR THE TWO NOTCHES

An Exclusive Armstrong-Victor Replacement Gasket Trade-Mark

Armstrong-Victor

ARMSTRONG VICTOR

CORK COMPOSITION GASKETS • CORK SHEETS

A Smashing Triumph Greets CHEVROLET

...and here's how they were introduced...



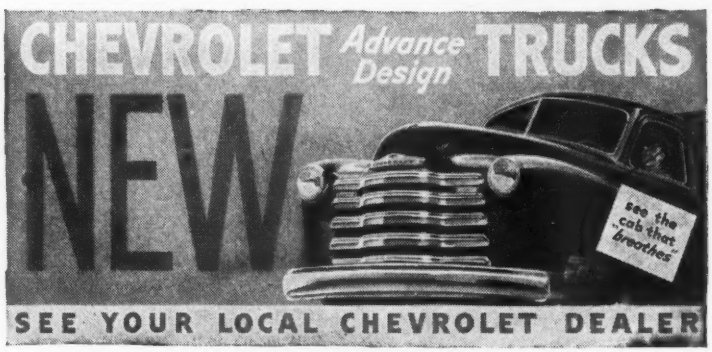
National magazine advertising backed up local advertising. This powerful two-page spread was the opening gun in the barrage.

Smashing advertisements in local newspapers broke the big news throughout America. The Chevrolet truck program was launched!





Farm papers carried the news of new Advance-Design Chevrolet trucks to the great agricultural market. Other vocations were also covered thoroughly.



And, of course, eye-stopping outdoor boards made their appearance on the nation's highways and streets at the same time. This advertising support helped dealers score their smashing triumph!

★

New Advance-Design TRUCKS with the Cab that "Breathes"



Not long ago America's truck owners sat up and took notice.

There was news in the making! America's leading truck builder was introducing a new line of trucks to the world of commercial transportation.

That announcement was the opening gun in a full-scale advertising campaign—the kind of advertising support that holders of the Chevrolet franchise can count on when a new Chevrolet product "hits the showroom."

With this thorough backing, Chevrolet dealers really opened the eyes of truck buyers. They raised the curtain on a complete line of great new Chevrolet trucks, including tractor-trucks and special-equipment chassis. They demonstrated such revolutionary Chevrolet developments as the cab that "breathes,"* to bring new comfort and safety to drivers. They showed how advanced engineering had set a new standard of truck values, with new features, greater strength and durability, scores of improvements.

Truck buyers saw . . . and were sold. The new Chevrolet trucks were launched in a smashing triumph. And the men who deal in "Transportation Unlimited" for business, industry and agriculture recognized "opportunities unlimited" in this latest product of Chevrolet.

CHEVROLET MOTOR DIVISION, *General Motors Corporation,* **DETROIT 2, MICHIGAN**

** Fresh-air heating and ventilating system optional at extra cost.*

Going Forward Together  *You and*

CHEVROLET

CHEVROLET

Holland Wins Again . . (Continued from page 54)

Indianapolis classic, came home the winner two-and-a-quarter laps ahead of Emil Andres, of Chicago.

Holland's official time was one hour, eight minutes and 23:59 seconds. He piloted a Peter Offenhauser 270-cubic inch special, the same vehicle which won the Indianapolis classic in 1941 for Mauri Rose and Floyd Davis.

Holland's troubles came at the very start of the long grind and was forced to retreat to the pit.

Competing against 17 cars, Holland started in seventh position, more than a lap behind the early pace-setters. For the first 22 laps, the race belonged to Andres, who made the most of his pole position which he won by a qualifying time of 34:67, only 1/100th of a second off Rex May's world record.

Andres, piloting a 274-cubic-inch Offenhauser, gave way to fellow-Chicagoan, Tony Bettenhausen, who clung determinedly to first place until 82 laps had been completed.

At the 20-mile mark, Holland was deep in sixth place. Mid-way through the 100-mile grind, Holland was challenging the leaders from third place.

Gradually, Holland pulled up on Bettenhausen and was only 12 seconds behind the Chicago speedster when Bettenhausen's Wolfe Special encountered trouble.

Bettenhausen fought it out, however, and managed to pull a lap ahead in the next 10 miles. Finally, he was forced to bow out when his spark plugs decided to call it quits.

Holland's victory gave him a 200-point lead for the 1947 national speedway diadem over Mauri Rose. Holland won the season's opener at the Bucks County bowl—a 20-mile sprint race—on May 11.

Only 11 of the 18 cars—largest field ever to race in a 100-mile meet in the east—finished.

Rex Mays, winner last year, failed to qualify, but the Long Beach, California, driver got in for ten laps when he replaced Duke Dinsmore, who suffered an eye injury similar to Holland's.

Walt Brown, of Massapequa, L. I., snagged third place. He drove a 256-cubic-inch Offenhauser.

Billy Devore, of Indianapolis, came in fourth with his Shoof Special, a 270-cubic-inch Offenhauser.

Defending National Champion Ted Horn, of Paterson, N. J., finished in fifth spot, driving a 255-cubic-inch brand new Offenhauser. Charles Van Acker, of South Bend, Ind., chugged into sixth place.



Kliplok Test Clamp

A heavy-duty test clamp to be attached to ends of electric cords on portable equipment such as floodlights, sanders, welders, drills and so forth, the Trico U-66 All-purpose Test Clamp is the product of the Trico Fuse Mfg. Co., 2948 N. 5th St., Milwaukee 12, Wis.

It is designed to carry up to 150 amps. continuously.

Barrett Says:

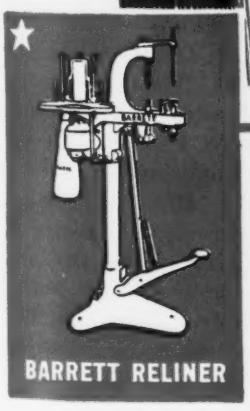


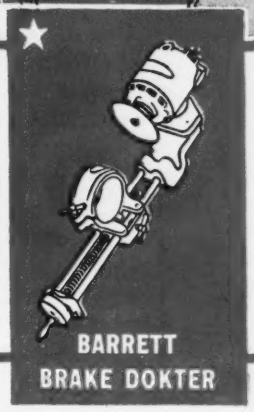
Make Two Profits On Every Brake Overhaul



Farming out your brake drum work is like giving away the 92% gross profit you could make with a Barrett Brake Drum Lathe in your own shop. Any mechanic can easily machine, grind and hone to perfect finish any type or size of drum, and eliminate all time lost by waiting for some other busy shop to return your rush jobs.

Keep That Second Profit For Yourself ...Ask Your Jobber





BARRETT EQUIPMENT CO.

The World's Finest Brake Service Equipment

TWENTY-FIRST AND CASS ● ST. LOUIS 6, MO.

Write for Barrett Condensed Catalog . . . It's FREE

Moran Resigns . . . . .

(*Continued from page* 54)

portant work in Washington. In compliance with a government request, NADA induced him to close his retail automobile business in Pittsburgh and direct for the Treasury Department the sale of its vast amount of surplus automotive equipment. When this assignment was completed in August, 1945, Mr. Moran was named executive vice president of NADA.

"It is with sincere regret that the officials of NADA have accepted the resignation of Mr. Moran," President Anderson said in his statement. "We have done so only because we do not think that in the face of promising conditions in our industry we could reasonably ask him to make further sacrifices in behalf of the trade in which for so many years he successfully operated as a salesman and a dealer. Mr. Moran feels, and rightly, that with the imminent return of normal production of new cars, he owes an obligation to himself and his family to again engage actively in private business. As practical dealers, members of the NADA Executive Committee understand his attitude perfectly and therefore have agreed to release him from his current duties.



Amco Promotes Shepherd

The Asbestos Manufacturing Company of Huntington, Indiana, announces through Neville C. Foss, Amco President, the appointment of S. E. (Sid) Shepard as Vice-President and General Sales Manager.



S. E. Shepard

Entering the industry with the Multibestos Company in 1921, Shepard served first as Assistant Sales Manager and later became Sales Manager. With the acquisition of Multibestos by the Raybestos-Manhattan Company, Shepard became Merchandising Manager at the Raybestos Division. Subsequently he was made Director of Replacement Sales of that Division, and in addition was made supervisor of the advertising and merchandising programs for the replacement trade.

Amco recently sold 25 per cent of its common stock to the Thermoid Co. of Trenton, N. J.



VOLTAGE REGULATORS

Nerve center of the entire automotive electrical system is the voltage and current regulator. Because of its importance it must be rugged as a tank but as precision made and adjusted as a fine watch. Electra Regulators meet every requirement! Each unit must pass precise adjustments and tests under complete conditions simulating actual use.

Electra, one of America's oldest and largest manufacturers of voltage regulators, offers you a *complete replacement line*—fourteen 6-volt models to fit all customers' needs. It's the *profit line* for more than 1300 jobbers and their dealers. Investigate these dependable products—write for complete information.

For Over 20 Years — Makers of Precision Automotive Electric Controls and Switches

Electra MANUFACTURING COMPANY

Main Offices: 433 Railway Exchange Bldg., Kansas City, Mo.

Plants • KANSAS CITY, MO. • ATCHISON, KANS.



VOLTAGE REGULATORS • GENERATOR CUT-OUTS • STARTER SWITCHES • DIMMER SWITCHES • HEADLIGHT RELAYS • HORN RELAYS

MEWA Elects . . . . . (*Continued from page* 54)

Goyer Supply Co., Greenville, Mississippi; Noble Davis, Davis Automotive Supply Co., Henderson, Texas; George E. Hull, Parks & Hull Automotive Corp., Baltimore, Maryland, T. R. Jeffree, Jeffree & Jeffree, Ltd., Vancouver, B. C., Canada; John M. McClure, Minneapolis Iron Store, Minneapolis, Minnesota; James C. Parker, Motor Parts & Supply Co., Mobile, Alabama.

The most important action by the Board was the decision to have the members vote in executive session at the convention next December on the advisability of withdrawing from support of the ASI Show and holding a manufacturer-wholesaler show under MEWA auspices.



F. K. MEYER
New MEWA President



Industry Studies Law

(*Continued from page* 54)

Ford is the only major automotive manufacturer to have the union shop and that will be undoubtedly continued legally in the new Ford contract which certainly will be completed before August 22 and can run for a year from that date. What will happen so far as dues check off is concerned is not known but undoubtedly the union could provide its members with printed letters of authorization which they would sign and return to the company.

While the new law provides for damage suits against unions, the general opinion is that this provision is not likely to be used much. Actually 26 states have already had previous provisions of that nature and they have not been exercised to any extent. Since the automotive industry has been pretty highly organized for some years now, the problem of jurisdictional strikes is a minor one and is not likely to cause any particular action under the new labor law.

Missouri Dealers Elect Officers for Coming Year

At the annual meeting of the Missouri Automobile Dealers' Association held in St. Louis recently, the following slate of officers was elected for the coming year: H. T. Gooch, President; R. S. Armacost. Vice President; G. M. Berry, Treasurer; and J. A. Schlecht, Secretary.

Don't forget to sell yourself too!

SURE—you use the best materials. But why not *tell* people about it and give your reputation an added boost? Take a bearing replacement job, for instance. That customer has been reading Timken advertising for years. The "Timken" trade-mark means top quality to him. So it makes him feel mighty good to know that a Timken tapered roller bearing is being put into his car. And a lot of the good feeling he has for Timken is reflected on *you*.

So, to sell *yourself* as well as your time and materials . . .



. . . Just tell 'em it's "TIMKEN"*



Timken tapered roller bearings normally outlast the car itself. That's one reason why you find them on most leading makes of cars, trucks, and busses. With Timken bearings, friction is eliminated. There's practically no wear. And parts are kept in perfect alignment.

The Timken Roller Bearing Company is the only bearing company in America which makes its own steel. And for nearly half a century the Timken Company has been the out-and-out leader in 1) advanced design, 2) precision manufacture, 3) rigid quality control and 4) special analysis steels.

To guard your reputation for top quality service, always make sure the "Timken" trade-mark is on every tapered roller bearing you install. The Timken Roller Bearing Company, Canton 6, Ohio.

TIMKEN

*TRADE-MARK REG. U. S. PAT. OFF.

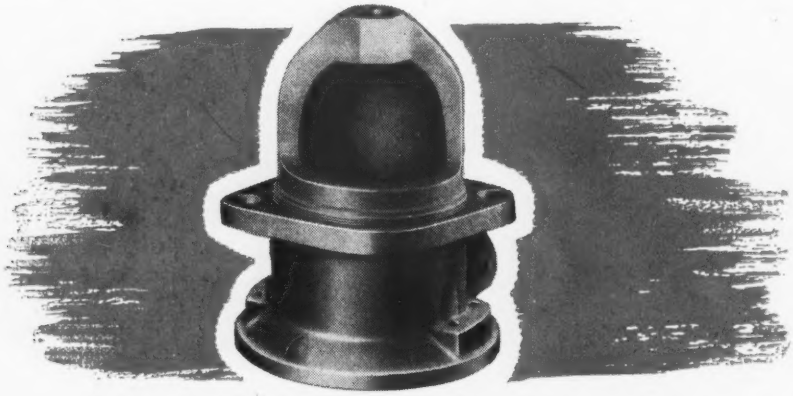
TAPERED ROLLER BEARINGS

NOT JUST A BALL ○ NOT JUST A ROLLER ⊂⊃ THE TIMKEN TAPERED ROLLER ⊂⊃ BEARING TAKES RADIAL ◎ AND THRUST →◎← LOADS OR ANY COMBINATION →✳←

Thermoid Acquires . . . (*Continued from page* 54)

facilities, and distribution necessary to the company's future program are now made available by the Thermoid affiliation. Mr. Foss explained that the Thermoid Company was in addition now preparing to offer its common stock for Amco's common and preferred on the basis of two Thermoid for one of Amco's preferred and one Thermoid for four of Amco's common. Mr. Foss stated that his Board of Directors, aware of the steady growth and aggressive reputation of the Thermoid Company under Fred E. Schluter, Thermoid President since 1935, sought the advantages for Amco which would accrue through Mr. Schluter's leadership.

Evidence of increased activity at Amco was revealed in the announcement of the appointment of S. E. (Sid) Shepard as Vice President and General Sales Manager. Mr. Shepard's reputation in the replacement trade is well known from his work as Replacement Sales Manager of Raybestos for many years, prior to which he was Sales Manager at Multibestos for fourteen years.



BULLDOG
Starter Motor Housing Again Available!

Once again this much-in-demand BULLDOG replacement is available for volume sales, with ample materials on hand to meet all normal production requirements.

Manufactured to the high engineering and quality standards that characterize all BULLDOG replacement parts, this Starter Motor Housing offers an exceptional value. Immediately available for delivery after July 15th are the following numbers:

No. 1867896 Jambor-Bulldog Starter Motor Housing for 1938 to '46 Chevrolets
No. 852020 for 1939 to '40 Plymouths and 1940 Dodge

Other numbers will follow at the earliest possible date for later model Chevrolet, Plymouth, Dodge, Chrysler and DeSoto models.

Place your orders now for your current as well as your fall requirements.

NOTE: No shipments will be made from July 4th to 13th, as our factory will be closed for plant vacations during this period.

FREE...
If you do not already have them, write for our complete catalog and price list.





JAMBOR Tool and Stamping Co.
3057 NORTH 30th STREET
MILWAUKEE 10, WIS., U. S. A.

Worthington, Ford Get New Posts with Koppers

Appointment of John A. Worthington as General Sales Manager of the Piston Ring Division of Koppers Company, Inc., was announced recently by Allen W. Morton, Vice President and General Manager of the Division.

At the same time, Mr. Morton announced that T. Latimer Ford, who has been with Koppers or its affiliates since 1908, and has become come widely known in the piston ring field, will head up a new Company department devoted exclusively to replacement sales.

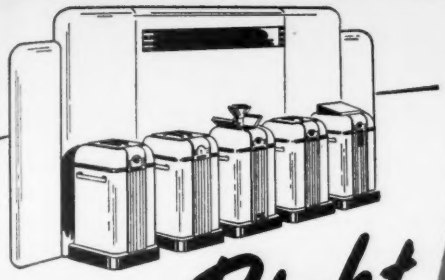
In announcing the appointments, Mr. Morton said:

"In his new position, Mr. Worthington will assume responsibility for unifying and directing all sales activity of the Division, looking forward to increasing service to customers and ultimate expansion of the Division's scope of operations.

"In the replacement sales department to be headed by Mr. Ford, our increased activity will be carried into the automotive, industrial, marine, oil industry, and aircraft fields."



"Slow down a bit dear. I want to pick up this hitch-hiker."



The Right U.S. Lubricating UNIT

WHERE you want it
WHEN you want it

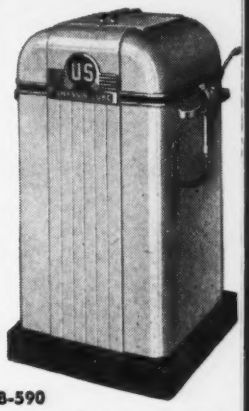


JB-792 Portable, Oil Drain Unit. Permanent Container with drain valve.

You're really in the lubrication business and ready to go when you install U. S. De Luxe Air Clipper Lube Units. These beautifully matched units provide you with the complete set-up that dresses up your station, literally invites business, inspires confidence, and puts profits in your cash register.

Neat and trim, with gleaming white baked enamel finish trimmed in red and chrome, U. S. De Luxe Air Clipper Lube Units are portable, completely flexible, and carefully designed to provide a perfectly matched set when used in combination.

Both the Chassis and Gear Lube Units will hold a 100 pound container and are equipped with the patented (U. S. Patents 2,105,990 and 2,105,991) U. S. air operated elevator raising mechanism for raising cabinet, pump unit, and suction stub while changing drums.



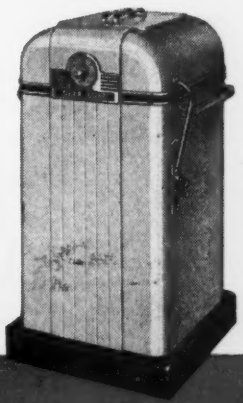
JB-590
Portable, De Luxe Air Clipper High Pressure Chassis Lube Unit



JB-191 Stationary Service Desk

You'll do a better job, in less time with U. S. Lube Units. The flow of lubricant from a U. S. Lube Unit is always positive, even, and steady—never in jerks and sputters that fizzle out to nothing. On both the up and down strokes of the powerful, compactly-built lube pump, air pressure is controlled by one, and only one, air valve. Seated against glass-hard nitralloy steel, this precision-machined, patented Rotary Air Valve will show little if any wear even after years of use.

You can purchase U. S. De Luxe Air Clipper Lube Units either in matching sets or individually. Consult your automotive jobber for his recommendations for your particular station layout.

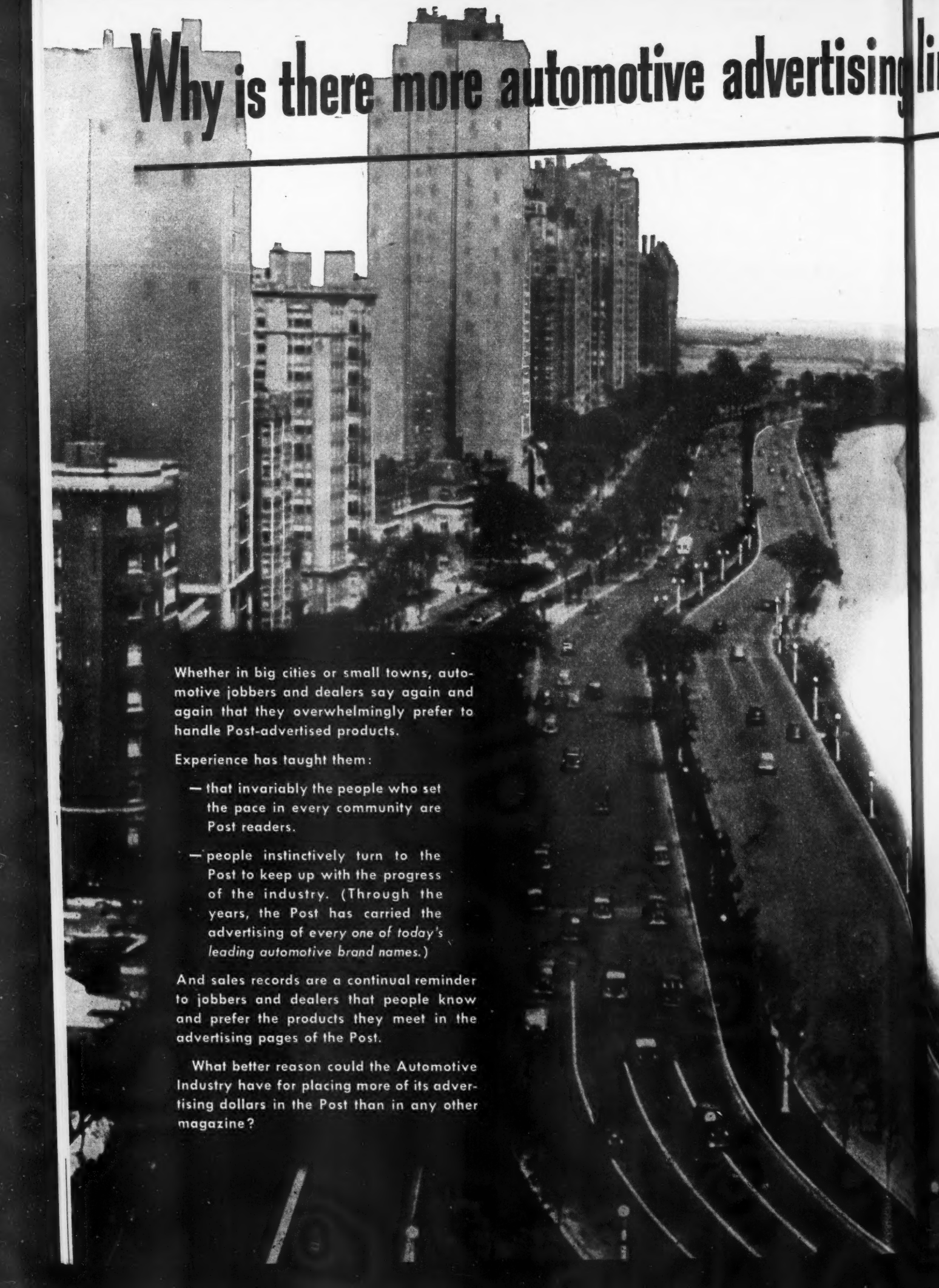


JB-490 Portable Air Operated Gear Lube Unit.

U.S.
AIR COMPRESSORS
HYDRAULIC LIFTS
LUBRICATING EQUIPMENT
Standard of the World
THE UNITED STATES AIR COMPRESSOR CO. CLEVELAND, OHIO

THE U. S. AIR COMPRESSOR COMPANY
3200 Harvard Avenue • Cleveland 5, Ohio
AIR COMPRESSORS • HYDRAULIC LIFTS • LUBRICATING EQUIPMENT

Why is there more automotive advertising li



Whether in big cities or small towns, automotive jobbers and dealers say again and again that they overwhelmingly prefer to handle Post-advertised products.

Experience has taught them:

— that invariably the people who set the pace in every community are Post readers.

— people instinctively turn to the Post to keep up with the progress of the industry. (Through the years, the Post has carried the advertising of *every one of today's leading automotive brand names.*)

And sales records are a continual reminder to jobbers and dealers that people know and prefer the products they meet in the advertising pages of the Post.

What better reason could the Automotive Industry have for placing more of its advertising dollars in the Post than in any other magazine?

lineage in the Post than in any other magazine?

AUTOMOBILE AND AUTOMOTIVE AFTERMARKET ADVERTISERS IN THE SATURDAY EVENING POST

Acme Air Appliance Company, Inc.
A. C. Spark Plug Division,
General Motors Corporation
Adcrafters Company
Allis-Chalmers Manufacturing Company
American Bantam Car Co.
American Chain & Cable Company, Inc.
American Coach Co.
Anderson Company, The
Armstrong Rubber Company, The
Auburn Spark Plug Co., Inc.
Auto-Lite Battery Corporation,
Subsidiary of The Electric Auto-Lite Co.
Autopulse Corporation

Bear Mfg. Co.
Belden Mfg. Co.
Bell Company, Inc., The
Bendix Aviation Corporation
Black & Decker Mfg. Co., The
BMC Manufacturing Corp.
Bonney Forge & Tool Works
Borg-Warner Corporation
Bowers Battery & Spark Plug Co.
Bowes "Seal Fast" Corporation
Breakstone & Company
Bright Star Battery Company
Buick Motor Division,
General Motors Corporation
Burgess Battery Company

Cadillac Motor Car Division,
General Motors Corporation
Carpenter Manufacturing Company
Casco Products Corp.
Casite Corp., The
Caterpillar Tractor Co.
Champion Spark Plug Company
Chevrolet Motor Division,
General Motors Corporation
Chicago Streamlite Corporation
Chrysler Corporation
Chrysler Sales Corporation
Continental Oil Company
Cooper Tire & Rubber Co.
Crosley Motors, Inc.
Cushman Motors Works, Inc.

Delco-Remy Division,
General Motors Corporation
De Soto Motor Corporation
Diamond T Motor Car Co.
Dodge Car Division,
Chrysler Corporation
Donaldson, Inc.
Duo-Coach Corporation
du Pont de Nemours &
Company, Incorporated, E. I.

Elcar Coach Corporation
Electric Auto-Lite Company, The
Electric Storage Battery Company, The
Ellinwood Industries
Ethyl Corporation
Exola Products, Inc.

Federal-Mogul Service
Division of Federal-Mogul Corporation
Firestone Tire & Rubber Co., The
Fisher Body Division,
General Motors Corporation
Fisk Tire Company, Division of
United States Rubber Company
Ford Motor Company
Fram Corporation
Fruehauf Trailer Company
Fulton Company, The

Gabriel Company, The
Galvin Manufacturing Corporation
General Electric Company
General Motors Corporation
General Tire & Rubber Company, The
Glostex Products, Inc.
GMC Truck & Coach Division,
General Motors Corporation
Goodrich Company, The B. F.
Goodyear Tire & Rubber Company, The
Grizzly Manufacturing Company
Guarantee Products, Inc.
Guide Lamp Division,
General Motors Corporation
Gulf Oil Corporation

Hastings Manufacturing Company
Heil Co., The
Higgins, Incorporated
Hollingshead Corporation, R. M.
Hollis Company
Hove Engineering Co.
Hudson Motor Car Co.
Hull Mfg. Co.

International Harvester Company
International Mfg. Co.

Johnson & Son, Inc., S. C.

Kaiser-Frazer Corporation,
Graham-Paige Motor Corporation
Karriall Coach Company
K-D Lamp Company, The,
Division of Noma Electric Corp.
Kelly-Springfield Tire Company, The
Kendall Refining Company
Kerkling & Company
Kit Manufacturing Co.

Lee Rubber & Tire Corporation
Lighter-Lite Corp.
Lincoln Division,
Ford Motor Company
Loney Co., Harley C.
Lubaid Company
Lyon, Incorporated

Macmillan Petroleum Corporation
Mack Trucks, Inc.
Make-A-Lite Division,
Chefford Master Mfg. Co., Inc.
Mall Tool Company
McBurney, A. D.
McQuay-Norris Mfg. Co.
Mercury Division,
Ford Motor Company
Minnesota Mining and Manufacturing Co.
Moguloid Company of America
Moog Industries, Inc.
Motor Safety Institute
"M" System Manufacturing Co.
Muskegon Piston Ring Co.

Nash Motors, Division of
Nash-Kelvinator Corporation
National Battery Corporation,
Gould Commercial Division
National Carbon Company, Inc.,
Unit of Union Carbide and
Carbon Corporation
New Departure Division,
General Motors Corporation
New York Lubricating Oil Co.
Noblitt-Sparks Industries, Inc.
Nu-Enamel Corp.

Octa-Gane
Oldsmobile Division,
General Motors Corporation

Packard Motor Car Co.
Palace Corporation
Park Chemical Company
Parker Rust Proof Company
Pennsylvania Grade Crude Oil Association
Pennsylvania Rubber Company
Pennzoil Company, The
Perfect Circle Company, The
Petroleum Solvents Corp.
Phillips Petroleum Company
Plastiform Mfg. Co.
Plymouth Motor Corporation
Polaroid Corp.
Pontiac Motor Division,
General Motors Corporation
Power-Pak Products, Inc.
Publicker Industries, Inc.
Pyrene Manufacturing Company
Pyroil Company

Quaker State Oil Refining Corporation

Raybestos Division
of Raybestos-Manhattan, Inc.
Ray-O-Vac Company
Reo Motors, Inc.

Sackett-Nicholson Corp.
Schrader's Son, A. (Div. of
Scovill Manufacturing Company)
Schult Corporation
Sealed Power Corporation
Seiberling Rubber Company
Shakeproof, Inc., Division of Illinois Tool Works
Shaler Company, The
Shell Oil Company, Inc.
Sherrill Instrument Company
Simoniz Company, The
Simplex Products Corp.
Sinclair Refining Company
Socony-Vacuum Oil Company, Inc.
Standard Oil Company of California
Stewart-Warner Corporation
Studebaker Corporation, The

Texas Company, The
Thompson Mfg. Co., Earl A.
Tide Water Associated Oil Company
Timken Roller Bearing Company, The
Trailer Coach Manufacturers Assn.
Trico Products Corporation
Truckstell Co., The
Turk Corp., C. K.

United Motors Service, Inc.,
General Motors Corporation
United States Asbestos, Division
of Raybestos-Manhattan, Inc.
United States Electric Mfg. Corp.
United States Rubber Company
U. S. Industrial Chemicals, Inc.

Vulcan Manufacturing Co., Inc.

Wagner Electric Corporation
Walker Manufacturing Company of Wisconsin
Warner-Patterson Company
Wayne Pump Company, The
Westinghouse Electric Corporation
White Motor Company, The
Wilkening Manufacturing Company
Willard Storage Battery Company
Willys-Overland Motors, Inc.
Winchester Repeating Arms Company,
Division of Olin Industries, Inc.
Wind Turbine Co.
Wittie Mfg. & Sales Co.
Wix Accessories Corp.
Wolf's Head Oil Refining Company, Inc.

"X" Laboratories, Inc.

Zecol, Inc.



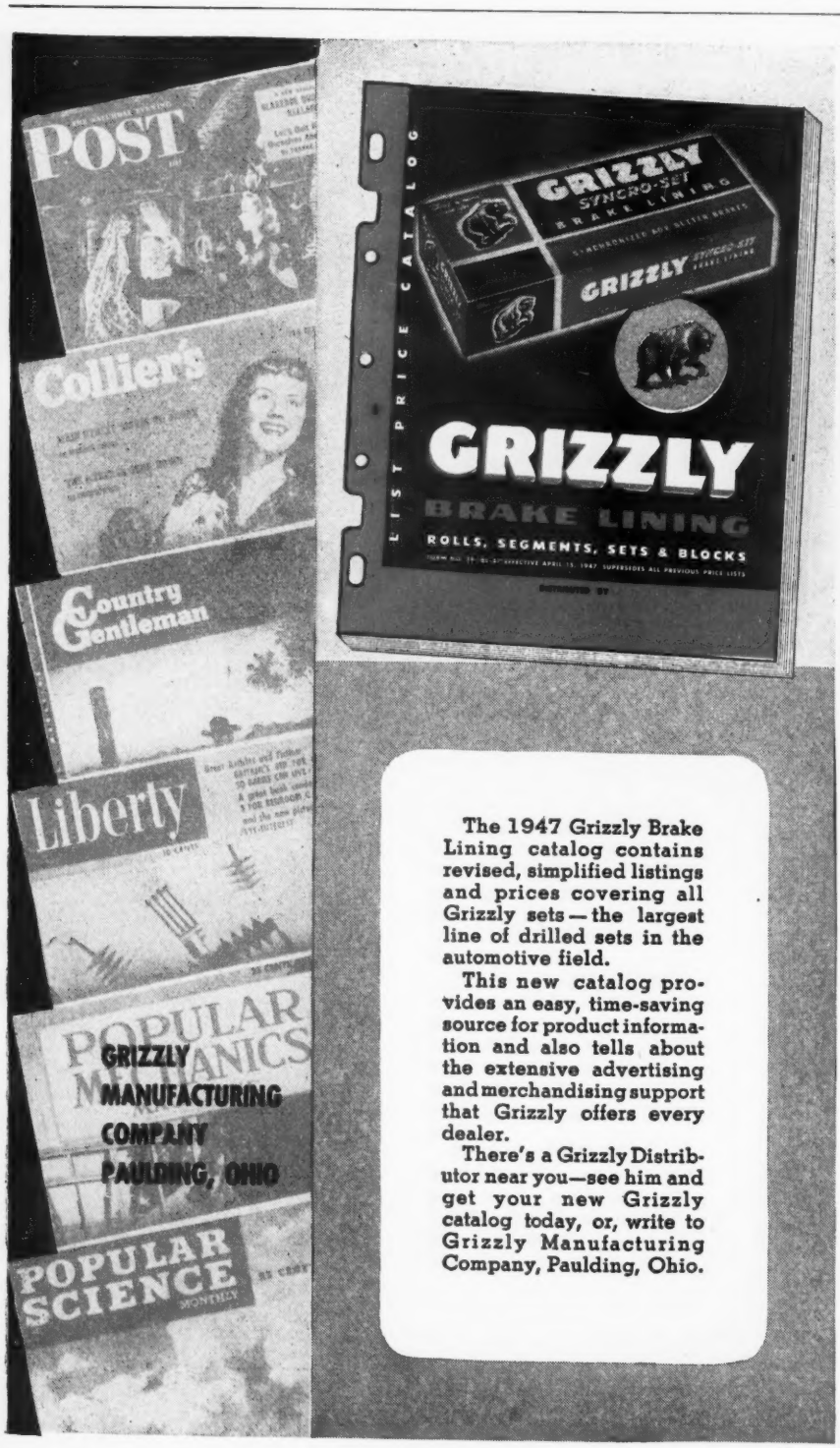
MEWA Plans to Quit ASI Show Unless Return to Former Status is Made

Just what will be the outcome of the stand taken by Whit Ruark and the M.E.W.A. regarding the A.S.I. Show, is still anyone's guess. Their stand that "a basic change has taken place in the A.S.I. Show" because "admittance to the show is left wide open insofar as persons classifying themselves as wholesalers are concerned," is emphatically opposed by Al Eichholz and the M.E.W.A. In a special bulletin to members, Eichholz quotes the 1947 A.S.I.S. president's agreement and then concludes that—"that is very far from a wide-open show." And goes on to say that "it should be the best show ever held, both for exhibitors and the member jobbers."

The N.S.P.A., over the signature of Jack Wiggins, carefully refrains from mentioning the stand taken by Ruark's Association but succinctly states "as has been the practice for many years, the first three days of the A.S.I. Show to be held at the Navy Pier, Chicago, Dec. 8 to 13, inclusive, will be closed to all except wholesaler members of the sponsoring associations. This will give N.S.P.A. wholesaler members an opportunity to contact without any outside interference. . . . There will be no open trade days to which garage men and other retailers are invited to attend as has been the practice in past years. However, non-member wholesaler guests may attend during the last three days as has been the custom, provided they are approved by the Show Credentials Committee. Thus, the 1947 Show offers N.S.P.A. wholesaler members the same courtesy, privilege and protection they have enjoyed in former years."

Summarizing a 13-page release to the press, Whit Ruark stated that the M.E.W.A. Board was convinced that the A.S.I. Show has ceased to be a bonafide manufacturer-wholesaler-dealer system of distribution; that the A.S.I. Show has ceased to provide contacts for adequate conferences between

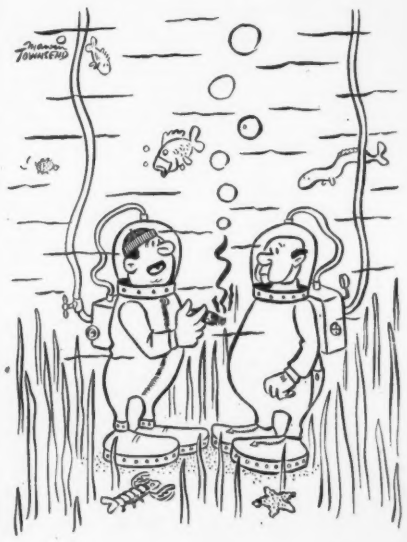
(*Continued on page* 136)



The 1947 Grizzly Brake Lining catalog contains revised, simplified listings and prices covering all Grizzly sets—the largest line of drilled sets in the automotive field.

This new catalog provides an easy, time-saving source for product information and also tells about the extensive advertising and merchandising support that Grizzly offers every dealer.

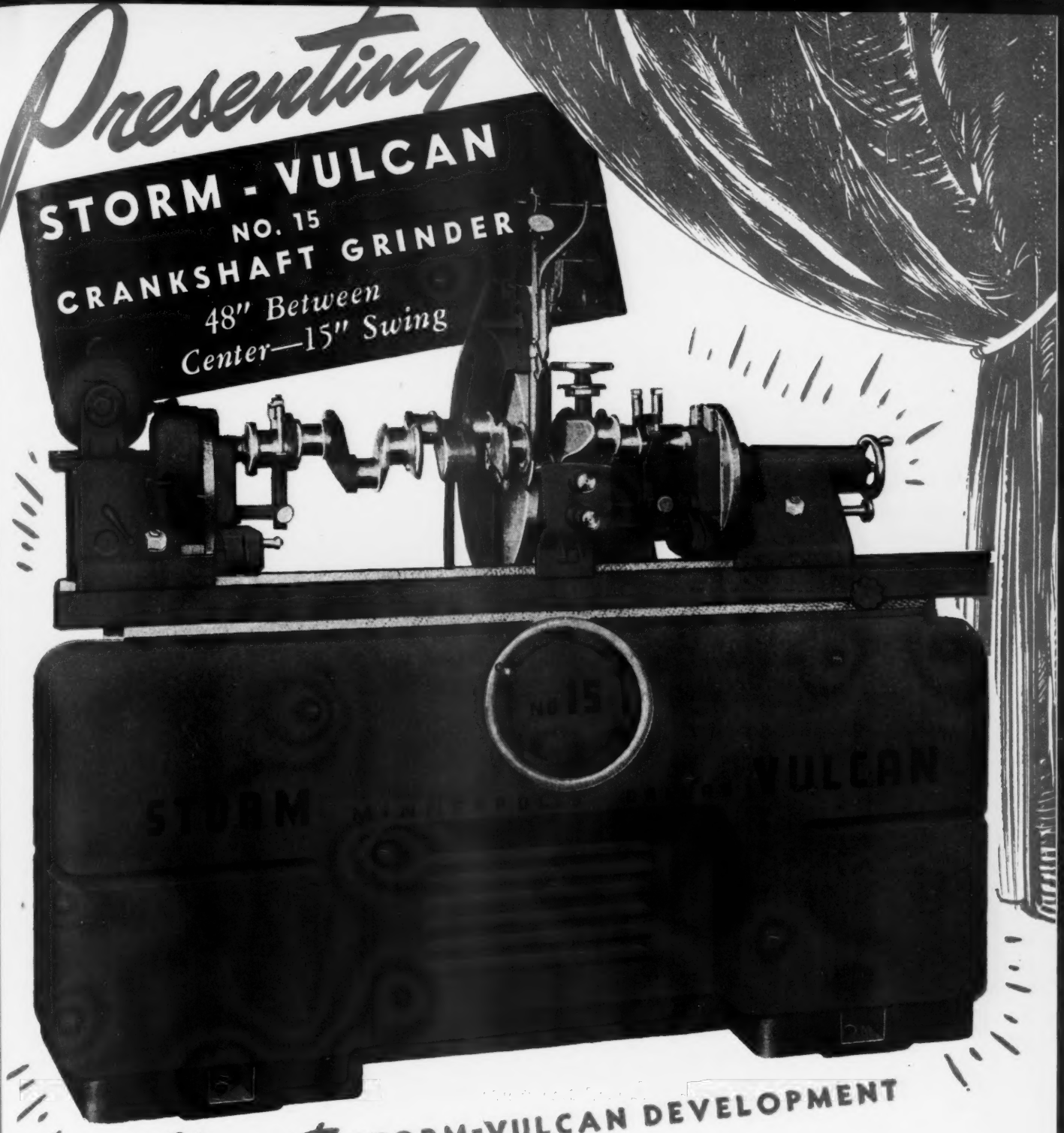
There's a Grizzly Distributor near you—see him and get your new Grizzly catalog today, or, write to Grizzly Manufacturing Company, Paulding, Ohio.



"Must be a cheap cigar. I can't seem to keep it lit."

Presenting

STORM - VULCAN
NO. 15
CRANKSHAFT GRINDER
48" Between Centers—15" Swing



THE *Newest* STORM-VULCAN DEVELOPMENT

- **GUARANTEED PRODUCTION . . . 140 Journals in 8 hours**
- **LOW ORIGINAL COST . . . within means of every shop**

In announcing the No. 15 Crankshaft Grinder, Storm-Vulcan inaugurates a new price and service policy. (1) Thorough training for operators. (2) Guaranteed high-speed production with proving test in your own shop. (3) One all-inclusive price—no extras to buy.

Here is a Crankshaft Grinder to meet all demands of any size shop . . . ***Speed with Accuracy*** for large-volume shops . . . ***Economy in Cost and Operation*** for shops where limited volume must pay profits.

Write for catalog and Details of Guaranteed Production at no Extra Cost

STORM-VULCAN *Manufacturing Co., Inc.*

MINNEAPOLIS, MINNESOTA - - - DALLAS, TEXAS

MEWA Criticizes . . . (*Continued from page* 134)

manufacturers and wholesalers; that wholesalers should not be expected to support a show that places their blessing upon conflicting types of competition; and finally the Board recommended to its members that they go on record in favor of discontinuing their sponsorship of the A.S.I. Show unless it is restored to its former status. The M.E.W.A. Board also recommended a separate show in conformance with its own ideals.

Just what the outcome of this difference in opinion will be, is impossible to forecast. However, with one association line-up against two, it would seem that the M.E.W.A. would have some difficulty in winning over the other two.

Chevrolet Names Thompson And Harrig to Fill Vacancies

I. W. Thompson has been named general parts and accessories manager for Chevrolet Division of G. M. and E. L. Harrig has been appointed national general service manager. Thompson had been serving under Tom F. Brown who resigned to become a Chevrolet dealer at Burbank, Calif. Harrig succeeds Ed Hedner who has become co-owner and editor of the Chevrolet Dealer News, Inc., in Chicago.

Dearborn Motors Corp. to Distribute Ford Tractor

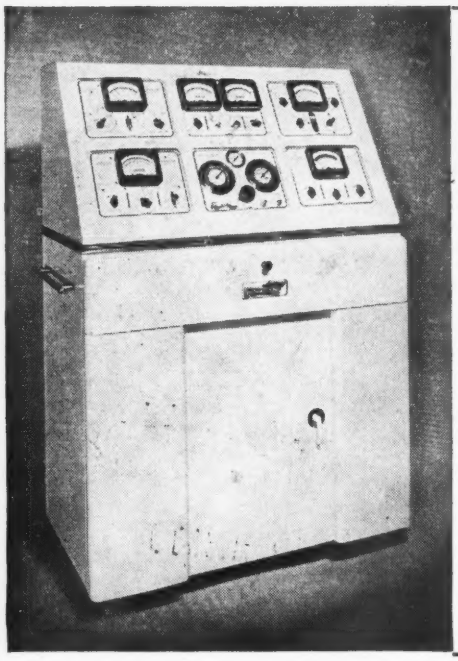
Production of the model 8N, new Ford tractor, now is under way at the Highland Park plant of the Ford Motor Co. and distribution is being made through Dearborn Motors Corp., Ford subsidiary. Although the tractor retains the basic design as an all-purpose, light weight unit, several improvements have been incorporated, including an improved hydraulic system and linkage attachment for implements and a new drawbar height control mechanism. Other features include a new four-speed transmission; swing-back seat; hinged radiator grille which swings down to permit cleaning the radiator core; automotive type steering gear; location of brake pedals on right side to permit operation of right and left brake with right foot only; full

(*Continued on page* 140)

More business

WITH THIS

Master Motor Analyzer



Scientific tune-ups that'll please your customers and make them come in again and again.

Engineered for quick and accurate testing. Designed to give complete, well-balanced service with simplicity of operation. Your choice of any 6 of these 10 modern units:

Fuel Analyzer · Voltage Regulator and Circuit Tester · Condenser Tester · Cam Angle Meter · Coil and High Tension Tester · Electric Tachometer · Spark Gap and Vacuum Gauge Compression and Vacuum Tester · Fuel Analyzer and Cam Angle Meter · Leakage and Vacuum Fuel Pump Tester.

- Any unit removed from the cabinet in a few seconds.
- Operates from a storage battery in the cabinet—no extension cords.
- All meters jewel-bearing, external zero adjustment, and D'Arsonval movement.
- Switches are heavy-duty and have silver-plated contacts.
- Each unit has its individual leads in separate compartments.
- Drop table in the front for easy access.
- Cabinet is perfectly balanced; supported by finest ball-bearing casters.

LANAGAN and HOKE Philadelphia 44, Pa.

PRECISION AUTOMOTIVE TESTING EQUIPMENT



"You should have thought of that before you bought the trailer."



OFFICIAL
BEAR SERVICE
INDIANAPOLIS MOTOR SPEEDWAY

OFFICIAL
BEAR WHEEL BALANCING
— SERVICE —
INDIANAPOLIS MOTOR SPEEDWAY

the Official Service at the RACE!

On the Speedway as on the Highway BEAR SERVICE is Preferred!



FIRST!

FIRST at the Indianapolis Speedway Classic with DY-NAMIC BALANCING

Yes, years ago Bear pioneered Dy-Namic Balancing at the Indianapolis Race. This year, as for years, Bear rendered the official wheel balancing service at the Track. Today, the outstanding favorite on the Speedway is Bear Dy-Namic Balancing. It's the Service Operators' favorite, too, because "it gets the wheel off." That not only insures precision balancing to limits far in excess of any other method, but also gives you the opportunity of selling more brake lining jobs and other brake and wheel parts.

CASH IN Locally by Booking the Bear RACE FILM Now! Today!



FIRST!

FIRST at Indianapolis with ALINEMENT SERVICE

Almost two decades ago, Bear pioneered this safety service which today is COMPULSORY at the Indianapolis Speedway. Cash in on Bear's years of safety pioneering! Cash in on Bear's national advertising in TIME and SATURDAY EVENING POST! No other sign for Dy-Namic Balancing and Alinement Service means so much to car owners as the Bear Sign!

What to do to CASH IN on the Indianapolis Race . . .

1. Show Bear's sound and color movie, "A Man's Game", to your local clubs. It tells the inside story of the 500-mile race, and the reason why each car must be alined and balanced before it is permitted to run. Write for details.

2. Publicize your Bear Service; see that your Bear Signs are prominently displayed.

2338

BEAR MFG. CO., Dept. M-1, Rock Island, Illinois

TELL ME HOW SOON we may have the

BEAR RACE FILM

to show our organization, friends, clubs, etc.

Name .....

Firm .....

Address .....

City ..... State .....

BEAR *does the job Right from Start to Finish!*

FRENCHTOWN PORCELAIN CO.

FRENCHTOWN, N. J.

Congratulates

MOTOR MASTER PRODUCTS CORP.

CHICAGO, ILL.

Manufacturers

of

BLUE CROWN SPARK PLUGS

for designing and manufacturing the spark plugs used in both first and second place cars in the 1947 Indianapolis Race



FRENCHTOWN PORCELAIN CO.

Sales Office
8 Muirhead Ave.
Trenton, N. J.

Factory
Frenchtown, N. J.


Used
in cars
winning
FIRST AND
SECOND PLACE
in the 1947 races
at the Indianap-
olis Speedway
FRENCHTOWN
INSULATORS
FRENCHTOWN PORCELAIN CO.
Sales Office
8 Muirhead Ave.
Trenton 9, N. J.
Factory
Frenchtown, N. J.

Ford Tractor . . . . . (*Continued from page* 136)

running boards, asbestos shielded on muffler side, and a heavier, stronger front axle. The tractor is about 200 lbs. heavier than the tractor built for Harry Ferguson, Inc.

Frank R. Pierce, president of Dearborn Motors, says the corporation will market approximately 50,000 Ford tractors and 200,000 Dearborn farm implements during the final six months of this year. The company will offer a complete line of basic and accessory implements manufactured by independent companies according to designs and specifications developed jointly. Production schedules call for 400 tractors a day at the Highland Park plant.



Scoto-Scope Automatic Sign Lighting Unit

The Process Engineering Company, 1969 S. E. 25th Ave., Portland 15, Ore., have introduced an automatic lighting control, called the Scoto-Scope, which is actuated by the headlamps of passing cars. Attached to a highway billboard, sign or store front, this unit lights up the display and keeps it lit until the car has passed. Housed in a 9 in. by 14 in. weatherproof cylinder, the Scoto-Scope is claimed by the makers to effect a substantial saving in current.

Detroit Gossip

Latest gossip from Detroit on 1948 model cars indicates that one manufacturer has completed plans for an F-head engine; that is, one with the intake valve in the head and the exhaust on the side. Hudson had an engine of this type some years ago and the design has the advantages of permitting larger valves; the incoming charges are directed at the exhaust valve thereby cooling it and the wall surface of the combustion chamber is reduced. Another innovation will be found in carburetion. To get away from the vapor-lock difficulties of present carburetors resulting from their position in the hottest location directly under the hood, at least one manufacturer will have a side outlet carburetor.



"I'm lucky if I'm getting 15 miles to a gallon of ice-cream."

the new Carter Service School





In April the Carter Service School reopened its doors in the new Carter Sales Building. With new equipment and expanded personnel this school is again training the men who service Carter Carbureters.

Applications for this specialized training may be made through your nearest Carter distributor.

CARBURETER

TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA

CARTER CARBURETOR CORPORATION • St. Louis 7, Missouri

Division of American Car & Foundry Company

536-R

Wiggins Honored by AAC

Because of his important part in the original formation of the Automotive Advertisers Council in 1941 and his consistent interest in and contributions to its work, Jack Wiggins was honored by the presentation of a specially engraved Hamilton wrist watch at the conclusion of the Council's spring meeting in Hot Springs, Va., May 23.

The presentation was made by Walter Kirkpatrick, Wilkening Mfg. Co., newly elected president of the Council. The inscription in the watch reads: "Presented to Jack Wiggins by the Automotive Advertisers Council in appreciation of his counsel, encouragement and good fellowship. 1941-47."

Somerville Succeeds Bayne As Plymouth Sales Head

R. C. Somerville has been appointed general sales manager of Plymouth, President D. S. Eddins announced recently. Somerville was formerly assistant general sales manager. Joseph E. Bayne has become general sales manager for Lincoln-Mercury.

Somerville began his career as stock clerk in a Detroit automobile factory, became a well-known race car engine builder, then spent many years in the service and production branches of the industry. He eventually entered automotive sales as a retail salesman and has progressed steadily in the field of automotive sales over the past 20 years.

Increasing Repair Profits with Arc Welding



WORN PARTS. Chipped tooth on a differential ring gear is built up with "Fleetweld 7" electrode, then ground to shape. Took about 20 minutes. Income: $3.



BROKEN PARTS. Hand points to completed weld in bumper bracket. Crack was Veed on both sides by grinding, then welded on each side. Took 15 minutes. Income: $2.50.

Courtesy Fox Garage, Franklin Park, Ill.



ALTERATIONS. Extending truck chassis and building special bodies is one of many types of work that can be done profitably with arc welding equipment. The Stokes Company, Riverdale, Ill., specializes in truck and trailer bodies.

SMALL INVESTMENT. Every garage can economically get into arc welded repair work with the new low-priced Lincoln "Fleet-Arc Jr." A.C. Welder. It handles all types of repair jobs and is easy to use. Immediate delivery. Full details in Bulletin 365, available free from The Lincoln Electric Company, Dept. 524, Cleveland 1, O.

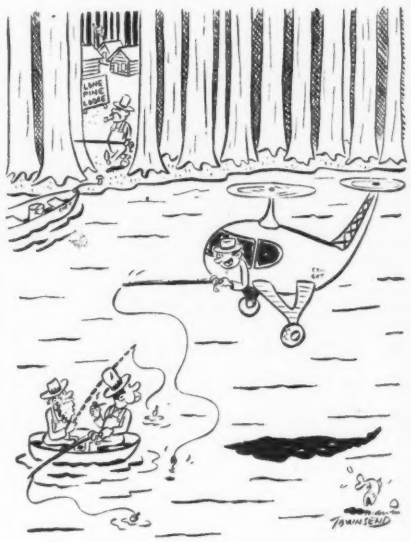
Advertisement

Brainard Appointed Sales Manager for "Rusco" Line

Mr. Lyman B. Brainard was recently appointed sales manager of the Automotive Equipment Division of The Russell Manufacturing Company, Middletown, Conn.

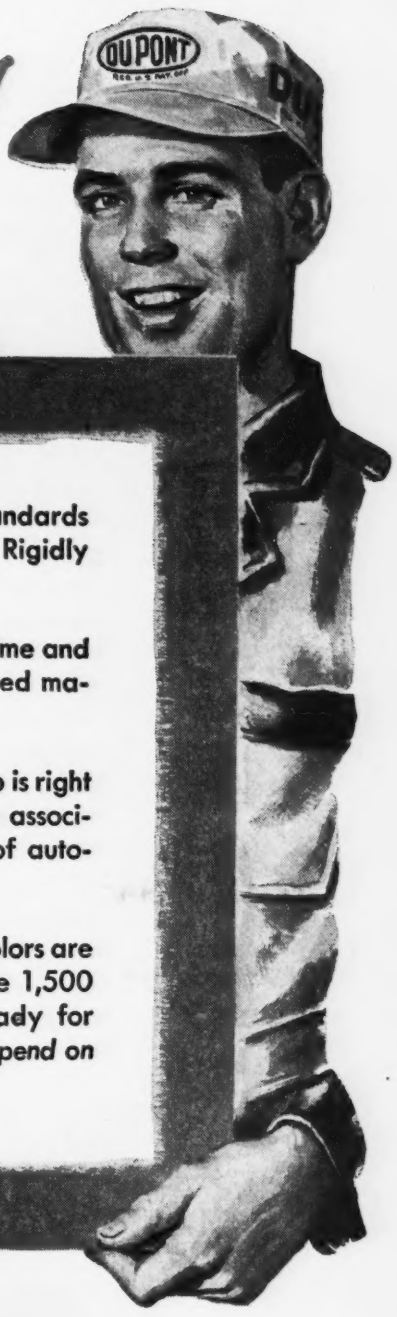
According to G. M. Williams, president of this company, Mr. Brainard will have supervision of the domestic sales of the "Rusco" line of friction materials, including clutch facings and brake linings, in the automotive original equipment field.

Having acted as business manager of this division up until this time, he brings to his new duties a fine background in the friction materials industry. He will be located at the company's main office in Middletown, Conn.



"I'll only be here a few minutes. I'm on my lunch hour from the office."

"Here's the easy Du Pont way to better refinish jobs!"



For fast, accurate color matches . . .	Matched to car-makers' standards by Du Pont factory experts. Rigidly pre-tested in every way!
. . . that save you time and money . . .	Quick and easy to use; cut time and labor costs—eliminate wasted material!
. . . and help build repeat business . . .	Customers know a DUCO job is right —*every time*. It pays to be associated with the best known of automotive finishes!
Depend on Du Pont! . . .	Over 700 DUCO matched colors are now available—one of the 1,500 Du Pont stock points is ready for your order. Yes, you can *depend on Du Pont!*

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

DUCO
REG. U.S. PAT. OFF.

MATCHED COLORS

Bring Out the Best in DUCO . . .

Good things come in pairs . . . and the best thing in compounds is DUCO Rubbing Compound #2. It's made to work with DUCO . . . cuts spray-wave, but won't scratch the film. Try it on your next job . . . *feel* and *see* the difference!



● To get your fair share of new tire business you've *got* to take trade-ins.

But that doesn't mean you have to lose money on trade-ins. You can handle them at a good profit . . . if you do it the Bowes "Seal Fast" way. There is, and will continue to be, a mighty strong market for reconditioned tires, and *you* can cash in on it.

Talk it over with your Bowes "Seal Fast" distributor. Let him show you—in cold, hard figures—how other dealers are making handsome profits at both ends of the new tire business. Bowes "Seal Fast" dealers are making money on used tires—and selling more than their normal share of new tires, at full profit—START NOW TO GET YOURS!

BOWES SEAL FAST

BOWES "SEAL FAST" CORPORATION
INDIANAPOLIS 7, INDIANA

Anibal Chief Engineer of Pontiac Motors to Retire

Ben H. Anibal, who directed the engineering developments of the Pontiac car since its inception, retired July 1. He had been with General Motors 34 years and was chief engineer for 25 years not counting four years as chief engineer of the old Peerless Motor Car Company. He was instrumental, while in the engineering department at Cadillac, in designing the first V-8 automobile engine built in this country and the first car to be electrically lighted and started.

Booster Banquet to Be Given at Stevens Hotel

The Automotive Booster Club International has announced that it will hold its annual industry banquet at the Stevens Hotel in Chicago on Monday night December 8. Mr. S. J. Pugh of B-19, Detroit, is the banquet chairman and is assisted by Milton Levit of B-7, Chicago.

Thermoid Appoints Weiss Fleet Sales Engineer

Announcement by Thermoid Company of the appointment of William H. Weiss as fleet sales engineer for the Automotive Replacement Division has been made by Fred Schluter, Thermoid president. The announcement was made at the firm's main offices at Trenton, N. J., where Weiss will make his headquarters.

In making the announcement President Schluter pointed out the increased importance of fleet operations in the future planning of the automotive industry. The appointment of Weiss, who has 16 years' experience in the automotive replacement field, should give added impetus to fleet sales activities of the company.

Weiss, who attended Drexel Institute and the Charles Morris Price School, both at Philadelphia, was formerly affiliated with the S. K. Wellman Company at Cleveland as sales engineer, branch manager, district manager and original equipment representative.

John BEAN

"VISUALINER"



New Accuracy
New Speed
New Sales Appeal

When you use the New John Bean VISUALINER, time spent checking and correcting alignment is cut in half. That's because you don't have to get-out-from-under to set and read gauges . A glance at the easily visible screen tells exactly how the correction is progressing. With the VISUALINER you get new accuracy and new customer appeal, plus new speed . . . They all add up to new profits. Ask your jobber or write us for full information.

JOHN BEAN MFG. CO.

DIVISION OF FOOD MACHINERY CORPORATION—LANSING 4, MICH.

WHEEL ALIGNERS AND CORRECTION TOOLS . . . WHEEL BALANCERS AND BALANCING TOOLS . . . . WEIGHTS STEAM CLEANERS . . . . CAR WASHERS



"Let 'em alone. They're just choosing up sides."

For All 'round Garage Welding



the Wilson "Busybee"

This arc welder has been especially designed to round out the "tool kit" of rural garages and repair shops. It is a high quality, light capacity welder for intermittent operation on rural power supply lines.

The "Busybee" is light in weight and small in size. It incorporates all the improvements and engineering features found in other Wilson arc welders—all known throughout industry for their "penetrating stinging arc."

Available in two sizes: 130 amp. at $162.00, and 180 amp. at $182.00, this machine is delivered ready to operate, complete with all accessories from a chipping hammer to 5 pounds of electrodes.

Complete information on the "Busybee" is given in Bulletin ADW-77. To obtain your copy write your nearest Airco sales office or dealer or to Dept. MG 6831, Air Reduction, 60 East 42nd St., New York 17, N. Y. In Texas: Magnolia Airco Gas Products Company, Houston 1, Texas.

Welding broken radiator bracket with Airco 90 Electrode

AIRCO **AIR REDUCTION**

Offices in All Principal Cities
Plus a Nationwide Dealer Organization

Headquarters for Oxygen, Acetylene and Other Gases . . . Carbide . . . Gas Welding and Cutting Apparatus and Supplies . . . Arc Welders, Electrodes and Accessories

Replacement Parts Market Likely to Remain Large

The four-year war holiday in the production of certain kinds of repair parts for motor cars has brought new problems in the planning of spare parts and sheet metal for the servicing of old models. The useful life of motor cars has been on the rise. Up to 1941 the average life was estimated at about 7½ years but during the war this average soared to about 9 years. Moreover, many of the older models do not have excessive mileage owing to gasoline rationing and, consequently, may stay on the road for a long time to come.

With the interruption in sheet metal replacements in recent years, most manufacturers have enormous back-logs of back orders for fenders, hoods, radiator grilles, and for mechanical parts as well. By the same token many cars on the road today are riding about minus one or more fenders, with gaps in front where grilles are missing, and some without hoods.

It will take some careful estimating by means of good samples to determine roughly, at least, how many of the older back orders still are in effect. The fact remains, nevertheless, that replacements will be required on cars as old as nine years or more for a long time to come.

Neither the availability of new cars during 1947 nor a drop in used

(*Continued on page* 148)



"But it does get tiresome pedalling."

You get Better Brakes All Ways with

Kelsey Hayes

Know How!

KELSI-FUSE
Superior Brake Drums:

Kelsey-Hayes scientifically developed brake drums are definitely superior, because their special construction, properly combining cast iron, (accepted by automotive engineers as the best brake surface material), centrifically cast to the preheated, one piece steel drum, makes a perfectly bonded single unit for greater strength-to-weight:

- **Safer, more efficient braking action**
- **Lengthens life of brake lining**
- **Greater dissipation of heat**
- **Cuts drum scoring**

(Inquiries from Automotive Distributors and Manufacturers accepted at Kelsey-Hayes, 3600 Military Ave., Detroit.)



KELSEY-HAYES WHEEL CO. DETROIT 32, MICH.

Replacement Parts . . . (Continued from page 146)

car prices can affect the situation materially. The fact is that the level of car prices is so high today as to make them out of the reach of many wage earners now riding old and perhaps decrepit cars. If used car prices were to hold up that would be much more favorable since the owners could get a price high enough to justify the outlay for a new car. But if used car prices decline the present owners doubtless will continue to operate them.

In addition to the back order situation cars are wearing out and need parts in due course, the load being intensified still further by accidental damage on the road. The rise in collision damage as well as the increase in the cost of repairs is well reflected in the inflated car insurance premiums which went into effect in 1945.

The upshot of it is that motor makers doubtless will have to prepare for full scale operations to produce parts for old models and even some ancient models. As it looks now this would keep present owners much more happy than they have been in recent years and has little element of risk in over-stocking for some time to come.

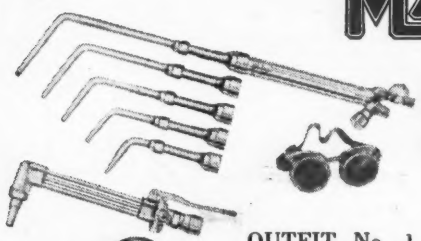
WELD...CUT...BRAZE...SOLDER



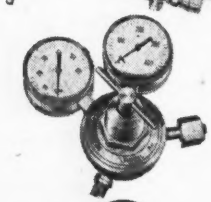
TAKE ALL AUTOMOTIVE JOBS IN STRIDE

STEEL...CAST IRON...
NON-FERROUS METALS

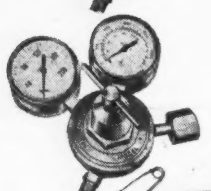
MARQUETTE
REGISTERED U.S. PAT. OFFICE



Oxy-Acetylene
WELDING And CUTTING
EQUIPMENT



OUTFIT No. 1. This combination is designed to take all automotive jobs in stride efficiently and speedily. Tip changes to fit the job can be made quickly *without* use of wrenches. You can skip from welding to cutting with the speed of tip changing. This outfit is complete in every detail—no extras to buy. Marquette has a complete line of Gas Welding and Cutting Torches, Regulators, Hoses, Goggles, Gas Welding Rods, Accessories and all types of fluxes. There are Marquette Outfits or Combinations of the latest advanced design to meet every need.



MARQUETTE ACETYLENE GENERATORS
Save 70% of the cost of acetylene

The Marquette Portable Acetylene Generator produces pure acetylene for hotter, more uniform flame. 4 models, 12 to 50 lb. capacity.





Sold Exclusively thru the
Nation's Leading Distributors

MARQUETTE
REGISTERED U.S. PAT. OFFICE

Automotive
EQUIPMENT

BATTERY CHARGERS
A.C. ARC WELDERS · ELECTRODES
GAS WELDING And CUTTING EQUIPMENT
ACETYLENE GENERATORS · ACCESSORIES

MARQUETTE MFG. CO. INC.
MINNEAPOLIS 14, MINN.

Buick Building at Half Rate Of Projected Capacity

During the first six months of 1947, Buick Division of G. M. turned out 125,724 cars or nearly 100,000 more than were built during the first six months of 1946. Production during June was 23,013 vehicles. At the present rate of production, Buick would build annually about 50 per cent of the 550,000 yearly capacity it expects to have when all facilities and ample materials are available.

North Carolina ADA Elects Officers for Year

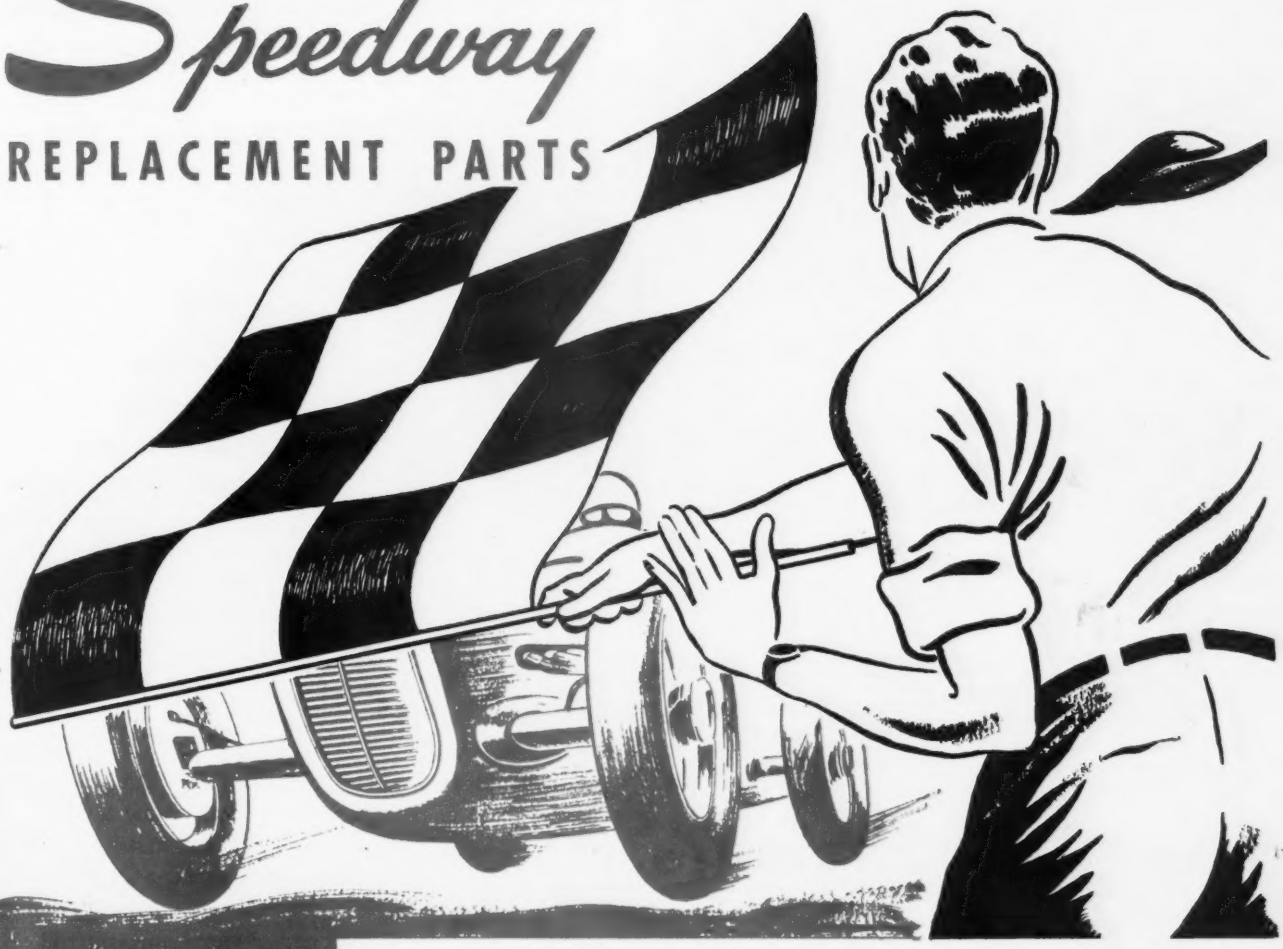
Allan Mims of Rocky Mount, vice president of the North Carolina Automobile Dealers Association, during the past year, was elected president of the organization at its 25th annual meeting at Pinehurst, N. C., May 12-14. He succeeds Paul L. Abernethy of Charlotte.



"Sometimes I wish our styles weren't so breath-taking."

Speedway

REPLACEMENT PARTS



Cam Shaft Bearings
Connecting Rod Bearings
Main Bearings
Aluminum Pistons
Piston Pins and Bushings
Valves and Valve Guides
Valve Springs and Retainers
Water Pumps and Kits
Motor Mounts
Tie Rod Ends
Shackle Sets
King Bolt Sets

PROVEN PRECISION

● Not just in laboratory tests . . . but in the sterner test of competitive use . . . Speedway Replacement Parts have established their precision! When you buy them you buy that irreplaceable thing—pride of craftsmanship! Because we yield to none in quality, **you** are sure of customer satisfaction with Speedway.

SPEEDWAY PRODUCTS CORPORATION
MANUFACTURERS OF REPLACEMENT PARTS
1400 EAST 20TH STREET • INDIANAPOLIS 7, INDIANA

Speedway

PRODUCTS OF PROVEN PRECISION

Towpac Folding Trailer

The Towpac, a one-wheel trailer that folds for storage in the car trunk, is being manufactured by the Grosch and Gilmore Co., 1320 North 45th St., Milwaukee 8, Wis.

The Towpac, which is mounted on single, castoring pneumatic tire, has a load capacity of 400 lbs. in its canvas body. It can be completely disassembled by means of spring-loaded locking devices that secure the tubular aluminum frame in position. It hitches to the car bumper at two points by means of non-corroding ball hitches. Total weight is 45 lbs. The Towpac sells for $129 complete with tire and bumper hitches.

Gumco Paint Remover

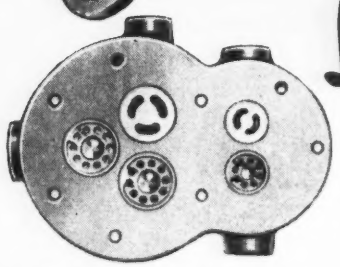
The Maplewood Products Co., Inc., St. Louis 17, Mo. is manufacturing a new paint remover and stripper for automotive finishes, called Gumco.

According to the makers, Gumco when used on enamel surfaces, will raise the paint and primer in blisters and bubbles down to the bare metal. It can then be washed off with water, and the surface requires no further neutralizing before refinishing. When it is used on lacquer, the manufacturers state, it loosens the paint in sheets or strips which can be easily pulled off. Gumco contains no benzol, acetone, caustic or lye. It is available in pint size and larger containers.

Wayne Features
FOR HIGHER EFFICIENCY



All Metal COMBINATION MUFFLER and FILTER
Less INTAKE RESTRICTION



WAYNE'S all metal combination muffler and filter is a highly developed, scientific unit . . . not just a felt pad in a grease cup. It causes very little restriction in the air intake. Most important of all, it may be kept clean by simply immersing it in solvent. A clean muffler contributes much to air compressor efficiency.

DUAL INTAKE VALVES

Another feature that increases the efficiency of a Wayne Air Compressor is the dual intake valve in the low pressure cylinder. Write for catalog to get the whole Wayne efficiency story.

THE WAYNE PUMP CO.
FORT WAYNE 4, INDIANA





for your protection AIR COMPRESSORS
GASOLINE PUMPS - CAR WASHERS - AIR SCALES - HOSE REELS - AUTO LIFTS

Kellogg-American Dual Pressure Air Compressor

The Kellogg Division of the American Brake Shoe Company, Rochester 9, N. Y., has developed a new dual-pressure air compressor which, although basically a standard single ½ hp. compressor, provides either 2.4 c.f.m. of air at 50 lbs. pressure, or 1.2 c.f.m. of air at 150 lbs. pressure. Change in pressure and volume is effected by means of an automatic motor pulley and sliding motor base. A hand lever moves this assembly, varying the motor speed and controlling the pressure through contact with a low pressure unloader valve. This compressor is available in two models: Model No. A-140-D with electric motor drive; and Model GE-140-D with gasoline engine drive (¾ hp.).



"Make up your mind lady."

SPEAKER



"EVERY PATCH PERFECT"



MATCH PATCHES*

Safe, "Welded" Tire Repairs Every Time . . . Satisfied Customers . . . Bigger Profits . . . More Repeats

Safety! That's what you're selling! That's what your customers want when they bring you a tube to repair. And when you "fix a flat" by the Speaker Method, *safety* is what you deliver! For there are no "duds" in Speaker Match Patches.



*Trade Mark Registered U. S. Patent Office

MODEL V-65—The Master Vulcanizer for Match Patches and Replacement Valves.

Every patch is chemically strip-fused to heat *at once, all over* . . . to "weld" permanently to the tube.

Speaker safety is guarded all the way from factory to you . . . by an exclusive packing process that seals each Match Patch in a 3-ply *wax-laminated* waterproof jacket inside a moisture-proof double-carton "sell and serve" package. That's why every Match Patch is always "factory fresh," always dependable. When you repair a tube, only the *safest* repair is good enough. With Speaker Match Patches you get safety . . . *every time.* And that means more business and bigger profits for you. Order from your jobber.

Just off the press! 32-page illustrated miniature catalog of entire Speaker line. It's FREE! "Quick Service" order forms speed up delivery from your jobber. Write Now!



J. W. SPEAKER CORPORATION • Milwaukee 12, Wis.



THE COMPLETE LINE OF TUBE AND TIRE REPAIRS

Winch Type Power Hoist

The H. D. Campbell Company of Rochelle, Ill., has just introduced a new winch type power hoist for use on garages, factories, warehouses, and so forth.

The new hoist features an eccentric drive which permits remote control operation. By this means the hoist may be controlled from a point close to the loading operation itself. Positive brake action holds the load at any point. The unit is available in 2 and 3 hp sizes, gear or belt drive, with a capacity up to 1800 lbs. and lifting speed up to 143 ft. per minute.

This hoist is available through farm implement and hardware dealers, or direct from the manufacturer.

Hydramight Utility Jack

A 3000 lb. capacity utility jack of unconventional design is being manufactured by the J. O. Stephenson Foundry & Manufacturing Co., Book Building, Detroit 26, Mich.

In place of the usual elevating handle, the Hydramight utilizes a foot operated hydraulic pump that is normally stored and used in the handle, but may be detached and used in other positions. The flexible connecting hose permits full stroke of the lift pump 6 feet away from the lift pad. Maximum range of the jack is 4½ in. to 19 in. All working parts are provided with lubricating fittings or oilless bearings and all wearing parts can be replaced with standard service tools. Shipping weight is approximately 50 lb. List price is $37.50, f.o.b. Detroit.

Penn-Drake Gumout

A new gum solvent, Penn-Drake Gumout, has been introduced by the Pennsylvania Refining Co., of Butler, Pa. Its action, when added to gasoline, is to dissolve carburetor gum, lacquer and varnish, according to the manufacturer. They suggest that, in the case of badly gummed carburetors, the float chamber be filled with Gumout. This is allowed to stand, the accelerator is then pumped and the engine fast-idled for ten minutes to do a complete cleaning job. Gumout may also be used to relieve sticking rings and valves and as a bench cleaner for small parts.

Kleen-Krome Concentrate And Seal-Krome in Kit

A new metal finishing kit containing both Kleen-Krome Concentrate and Seal-Krome is now available from Jackson and Shearer, 335 Ampere Parkway, Bloomfield, N. J. Kleen-Krome Concentrate is described by the manufacturer as an effective reagent for cleaning and polishing chrome, stainless steel, brass, porcelain and other smooth surfaces. Seal-Krome is a protection coating for the protection of bright surfaces from corrosion and is resistant to salt spray. These products were formerly available only in large quantities. The metal conditioning kit will be distributed through conventional jobber, dealer and retail outlets.

OUT OUR WAY



Safety is "in the bag" with Sol-Speedi-Dri

• Operators of filling stations, garages, shops, bus- or truck-terminals know that SOL-SPEEDI-DRI, a fast-acting absorbent for all liquids, works like a charm in cleaning up oil-soaked floors and surfaces.

SOL-SPEEDI-DRI, the field's original and foremost absorbent, is obtained by *selective* mining. Only the top-quality raw material is used—and this material is transformed into the finished product by the most modern equipment and methods.

Laboratory control and weatherproof packaging guarantee maximum efficiency from every pound of SOL-SPEEDI-DRI you purchase. When you use SOL-SPEEDI-DRI, you get *more* for your money.

Safety and
Maintenance Co., Inc.
No. 1 Wall Street
New York 5, N. Y.

•

Warehouse Stocks Maintained in Principal Cities of the United States and Canada.



Ford Grants Pension Plan And Seven-Cent Pay Raise

Full details of the Ford retirement pension plan have not been released by the Company but the UAW-CIO has given considerable publicity to certain provisions of the program. According to the union, agreement with the company provides for the pension plan in addition to a raise of seven cents an hour across the board and an additional five cents increase for more than 10,000 maintenance workers, core makers, and jobbing molders. Although the union states the plan amounts to an increase of more than 20 cents an hour, the company officially has remained silent although one spokesman said unofficially that the raise probably would amount to about 15 cents an hour.

As outlined by the union, major provisions of the retirement plan include (1) Benefits: Each Ford worker on retirement will receive one per cent of his pay times the number of years service, in addition to Federal Social Security benefits. The plan covers past as well as future service which will require building up a pension fund for workers who have been employed for many years. (2) Death benefits: In the event of death, all employe contributions plus interest will be payable to the employe's beneficiaries. (3) Total and permanent disability payments: Extent not announced. (4) Vested rights: Each worker is to have full right in his contribution and after a specified number of years is to have certain vested rights in the company's contribution. (5) Retirement age: Still to be determined, but probably optional between 55 and 65 years of age.

It should be remembered that the foregoing is the union's interpretation and should be considered in the light of the internal political considerations which form an important part of the UAW-CIO strategy. At the time of the announcement of the retirement plan, Ford spokesmen stated that a great many details still remained to be worked out and until this has been done and the results announced, full details will not be available.

(*Continued on page* 154)

New, High Profits In Seat Covers

with this Amazing new Rankin Plan



The whole industry is talking about it! *Volume* business for you—at PROTECTED profits—on a basis that enables you to run circles around any competition in town. Here's why:

- Deluxe, custom-fitted covers for all makes of cars (universal models also available).
- at POPULAR PRICES, so you can sell them at no more than the cost of ordinary, non-fitted covers.
- PROTECTED profits — no chains, catalogue houses, or cut-price outlets to bother you.
- a full line, in all the smart new plaids and stripes — truly the most beautiful covers in America.
- immediate deliveries, for any makes and models you want.

Get *your* share of the booming seat cover business NOW —with this plan which assures you the PROFITS and VOLUME you're entitled to. Tear out coupon for full details, TODAY!

WOVEN PLASTICS

—at 50% of former prices. Another "scoop" for alert dealers. Send for samples and prices.

RANKIN QUALITY...

The BIG *new name in* SEAT COVERS

RANKIN MANUFACTURING COMPANY, Dept. R, Cedar Falls, Iowa

MAIL THIS COUPON

Rankin Mfg. Co., Dept. R, Cedar Falls, Iowa
Please send free literature on your better profit plan on seat covers.

Name .....

Address .....

Town ..... State.....

Ford Pay Raise . . . . . (*Continued from page* 153)

The union had stated that cost of the plan at the outset to the company would be $200 million but this figure is believed to be inaccurate. One responsible company spokesman said that the cost would be much less than that but would not indicate any further details.

Whatever the provisions of the plan, its adoption by Ford marks a signal departure in labor relations and is bound to affect future contract negotiations of other automotive companies. In negotiations with G. M. this past spring, the UAW-CIO made a bid for some type of social security program but got nowhere. It is almost a certainty that when the contract is reopened on economic issues next year, a concerted drive for some type of social security will occur.

There has been much speculation about Ford's reasons for granting the demand for a retirement fund, especially since he undoubtedly would not have had to accede so long as he met the industry's pattern of 15 cents an hour. However, it is thought that basic reasons include a belief that a more stabilized working force will result and that productivity will increase. Moreover, the action is entirely in keeping with the youthful Ford Motor Company's president's personal program for enlightened industrial relations.



Reynolds and Reynolds Builds New Ohio Plant

The Reynolds & Reynolds Co., Dayton, Ohio, is planning the construction of a new production plant at Celina, Ohio, at a cost of $250,000 according to word received from Frank F. Pfeiffer, Vice-President and General Manager.

Work is expected to begin shortly with a possibility the building will be ready for occupancy next spring. Architectural plans indicate the new one-story plant will provide 35,000 square feet of floor space and afford straight-line production.

The Reynolds & Reynolds Company, established in 1866, manufactures and distributes standard accounting systems, business forms and allied products to the automotive trade throughout the United States.

The Celina building, it is stated, will provide much needed space for expansion of the Standard Systems Division.



Don't you think you ought to let me drive for awhile, dear?



three steps ahead

1 EXPERTLY CONTROLLED DEWAXING

2 DOUBLE DISTILLING

3 TRIPLE-FILTERING

THREE WORDS WILL CONVINCE YOUR CUSTOMERS WHY WOLF'S HEAD IS BETTER

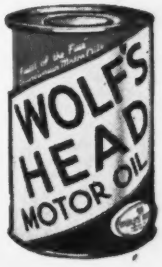
"Three Steps Ahead." There in a nutshell is the explanation of Wolf's Head superiority. Wolf's Head Motor Oil is made from the world's best crude—100% pure, premium grade Pennsylvania. In addition, Wolf's Head is refined these 3 steps further than ordinary motor oils:

1 EXPERTLY CONTROLLED DEWAXING—keeps Wolf's Head free flowing even in cold weather, without sacrifice of important lubricating qualities.

2 DOUBLE DISTILLING—concentrates the superior qualities of Pennsylvania motor oil — makes Wolf's Head richer, tougher, more heat resistant.

3 TRIPLE-FILTERING—removes all free carbon and other unstable, trouble-making impurities from Wolf's Head Motor Oil—eliminates objectionable sludge, varnish and gum deposits.

Wolf's Head *extra* refining steps are profits steps for you. When a customer asks why Wolf's Head is better—give him the answer, "Wolf's Head is 3 steps ahead of ordinary oils." Wolf's Head Oil Refining Co., Inc., Oil City, Pa., New York 10, N. Y.



WOLF'S HEAD

MOTOR OIL AND LUBES

100% Pennsylvania —"Premium Grade"

P.G.C.O.A. Permit No. 6

Ingersoll-Rand Announces

Ingersoll-Rand announces a new universal electric, all-purpose Impact Tool.

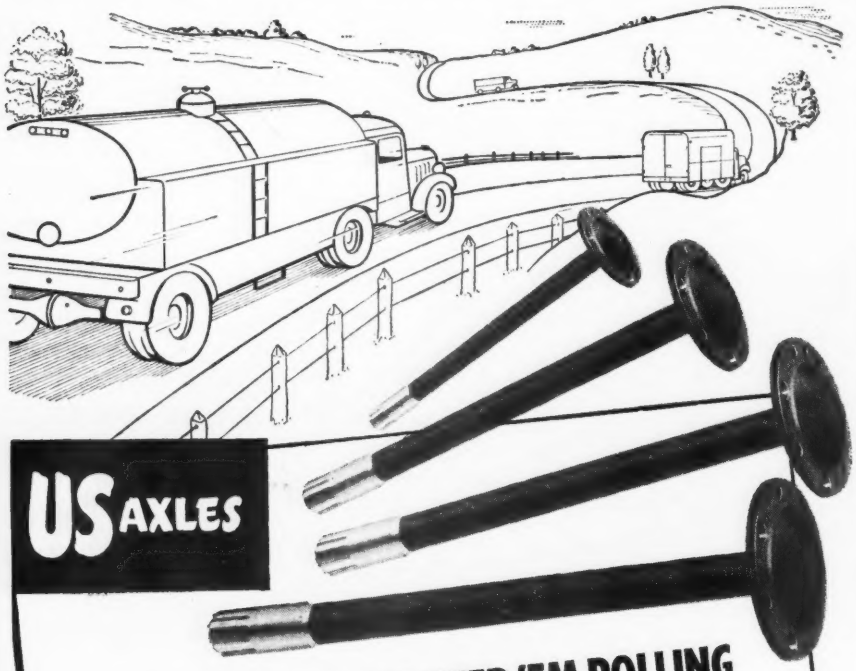
Using standard attachments, it will apply and remove nuts—drill—ream — tap — drive and remove screws—drive and remove studs—extract broken cap screws and studs—run wire brushes—do hole saw work—drill brick and masonry drive wood augers.

This new machine is designated as the Size 4U. It weighs 6½ lbs., has an over-all length of 10½ in., a free speed of 2000 rpm, and delivers 1900 rotary impacts per minute under load. It is powered with a specially designed reversible, universal, electric motor (3 amp.) that operate on 110 Volt, AC-DC.

The Impact Tool runs just as any conventional electric tool until the resistance to spindle rotation reaches a certain amount. Then a patented mechanism converts the power of the motor into "rotary impacts" which exert a more powerful turning effect than is produced by any other electric tool of comparable size.

One advantage of the impact mechanism, according to the maker, is that it permits the spindle to be stalled completely while the motor continues to run; thus eliminating motor burn-outs caused by overloading. The impact mechanism also eliminates torque reaction to the operator.

•TOUGH U. S. AXLES HELP THE WHEELS OF INDUSTRY TURN MORE PROFITABLY•



US AXLES

TOUGH U.S. AXLES KEEP 'EM ROLLING
and save time and money!

Tougher U.S. Axles save you time and money in long life and minimum maintenance costs. U.S. Axles are made tough because of correct engineering, best alloy steels, precision machining, and most modern scientific heat treating and rigid testing. You save with U.S. Axles always. At your Jobber's.

NEW
Free bulletin listing U.S. heavy duty replacement axles for Army Surplus trucks. Write for your copy today.

THE U. S. AXLE CO., INC.,
POTTSTOWN, PA., U. S. A.

Expect More Curved Glass In 1948 Model Automobiles

A general expectation is that curved glass may become much more general in automotive styling in the next year or two. However, because of technical difficulties in manufacturing of curved shapes, nothing extreme is contemplated, according to automotive designers. They point out that the problem is complicated by the laminated construction of safety glass since contour of the two outer layers must match exactly and that for this reason the amount of radius is limited and that complex shapes are very difficult to obtain. In addition, curved safety glass is much more expensive to manufacture, which is an important consideration. The automotive companies have been working with glass manufacturers for many years on the problem and both admit there are many problems still to be solved.



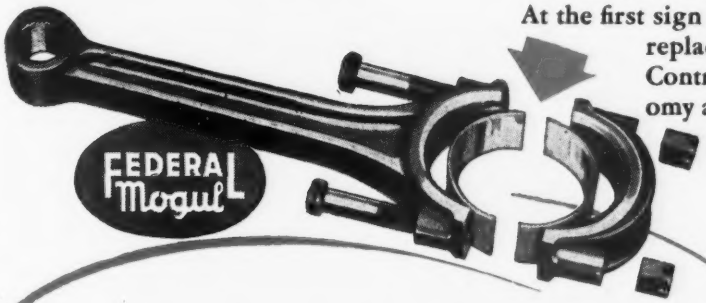
"How many years does it write without refilling?"

Performance goes up in smoke...



when worn connecting rod bearings cause oil pumping

Worn engine bearings are bad actors. Suspect them at the first sign of smoky exhaust. They let excess oil reach combustion chambers. There, it burns to fouling carbon on pistons, rings, valves and spark plugs, breaks down performance, kills pick-up. Federal-Mogul advertising tells car, truck, bus and tractor owners to *ask your mechanic!* Good mechanics know that just one badly worn bearing will oil-starve others, result in costly crankshaft damage. At the first sign of smoke, check those bearings! If worn, replace in sets with genuine Federal-Mogul Oil-Control Bearings to restore pep, power, economy and build customer satisfaction.



FEDERAL-MOGUL SERVICE
DIVISION OF FEDERAL-MOGUL CORPORATION
COLDWATER, MICHIGAN

Replace in Sets with Genuine

FEDERAL-MOGUL

Oil-Control Bearings



"He's too shy to whistle."

The Warner 1-2 Treatment

Beats the Heat

in all car cooling systems

Motorists prefer this simple, speedy, sure way to prevent hot weather overheating:

1. Warner Radiator Cleaner *thoroughly cleans* the cooling system of all rust, corrosion, oil muck and grease.
2. Warner Cooling System Protector *keeps it clean*—prevents rust and corrosion that lead to overheating.



Standard of protection for more than 25 years

Warner

A FAMOUS NAME IN AUTOMOBILE HISTORY

Write for FREE booklet on cooling system care

WARNER-PATTERSON COMPANY • 920 S. MICHIGAN AVENUE • CHICAGO 5, ILLINOIS

Kirkpatrick Heads AAC

Walter A. Kirkpatrick, manager of advertising and sales promotion, Wilkening Manufacturing Co., was elected president of the Automotive Advertisers Council at its spring meeting, held at The Homestead, Hot Springs, Va. He succeeds T. Faxon Hall, sales promotion manager, Walker Mfg. Co. of Wisconsin. Other officers elected were: George W. Stout, sales promotion manager, The Perfect Circle Co., vice president; C. H. LeFevre, advertising manager, Sealed Power Corp., re-elected secretary; and H. M. Wertz, advertising manager, The Toledo Steel Products Co., treasurer.

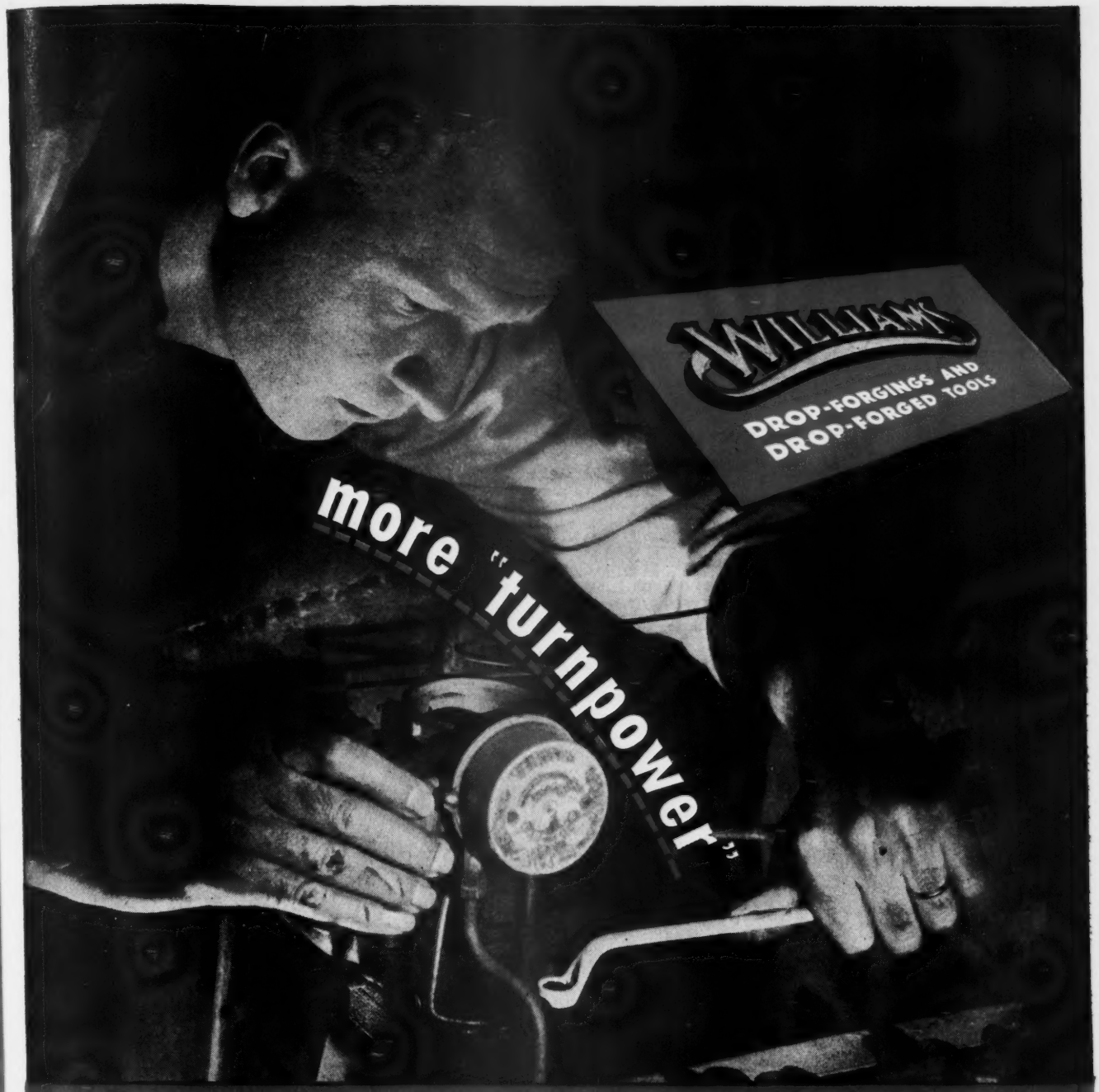
The meeting was attended by 40 advertising and sales executives of manufacturers of automotive replacement parts, tools, equipment, accessories and chemicals.

One of the important topics taken up at the meeting was the need for re-education of sales personnel. Discussion of this subject was led by H. M. Wertz, who demonstrated a new type of visual presentation.

H. C. Mohr, advertising and sales promotion manager, Packard Electric division of General Motors Corp. and R. M. Schutz, sales promotion manager, Maremont Automotive Products, Inc., were elected to the Board of Governors for a two-year period. C. B. Dietrich, sales promotion manager, Accurate Parts Mfg. Co., R. E. Conley, advertising manager, R. M. Hollingshead Corp., Whiz Automotive Division, and H. M. Wertz, advertising manager, The Toledo Steel Products Co. were re-elected to the Board of Governors.

Standing committees named by the new president were: Trade Paper Relations, Burt Hotvedt, Blackhawk Manufacturing Co., chairman; Don L. Hague, E. I. du Pont de Nemours Co., Inc.; J. F. Aspey, The Black & Decker Mfg. Co. Advertising Distribution Practices; Jack Hershey, Dayton, Rubber Mfg. Co., chairman; A. A. Ballantyne, Electric Auto-Lite Co.; S. R. Robinson, United States Asbestos Division. Shows: George W. Stout, The Perfect Circle Co., chairman; T. Faxon Hall, Walker Mfg. Co. of Wisconsin; R. E. Con-

(*Continued on page* 160)





Complete rotation of hex nuts is possible with these Williams Box "Superrenches" where the handle swing is limited to as little as 30° . . . less than one-tenth of a turn.

Offset handles clear obstructions that otherwise would bark knuckles. Their 12-point openings grip hex nuts on six sides . . . preventing slippage and rounding of the nut's corners.

Thin head walls permit fast and safe operation where clearances are limited. There is a full range of sizes and a variety of patterns to meet every need. Sold by automotive and aircraft distributors everywhere.

J. H. WILLIAMS & CO., Buffalo 7, New York

Kirkpatrick Elected . . (*Continued from page* 158)

ley, R. M. Hollingshead Corp.; C. C Tapscott, McQuay-Norris Mfg. Co. C. D. Dietrich, Accurate Parts Mfg. Co. Catalog and Literature: C. B. Dietrich, chairman; H. C. Mohr, Packard Electric; R. M. Schutz, Maremont Automotive Products, Inc. Publicity: E. F. Todd, The Imperial Brass Mfg. Co., chairman; R. Conley, Gene P. Robers, The Weatherhead Company; Albert Joseph, The AP Parts Corp.

The executive committee of the Council is composed of the new officers and the retiring president.



MEWA Members Honor Ruark

B. W. Ruark, General Manager of the Motor and Equipment Wholesalers Association, was honored on his 25th anniversary in Automotive Trade Association work by the membership of the M.E.W.A. on May 22 in Chicago.

To commemorate this anniversary event, the Board of Directors presented a resolution in the form of a beautiful hand-lettered scroll to "Whit" Ruark on behalf of the entire M.E.W.A. membership and Board in appreciation of his work and services rendered the Automotive Wholesale Industry during the past 25 years. The resolution was signed in his presence by the officers and directors of the M.E.W.A. at their annual meeting.

As a further commemoration of this 25th anniversary event the members of M.E.W.A., by individual participation presented General Manager Ruark with a complete set of sterling table silver and a large silver platter. The presentation was made on behalf of the membership by Franklin P. Gaul, President of the M.E.W.A. at a dinner held during the annual meeting of the Board of Directors of the Association.

GM Hydra-Matic Fluid Is a Replacement Part

In answer to recent queries relative to the lubricant for GM Hydra-Matic transmissions, General Motors Research advises that the fluid is regarded as a part of the drive and is handled as a replacement part. GMC has recommended that Hydra-Matics be serviced only by authorized Cadillac and Oldsmobile dealers with genuine fluid supplied by the factory.

Stating that this policy has been in effect since the introduction of the Hydra-Matic, GMR emphasizes that the policy is even more important today owing to the introduction of other makes and types of automatic transmissions. It is felt by GMR that the lubricant must continue to be a spare part of the car until the requirements of all types of automatic transmissions have been standardized.

NEARLY 10,000,000

(one in every three)

EMERGENCY CALLS

for battery and ignition service!

Based on reports of emergency calls made by 14,000 garages, the American Automobile Association estimates that *one in every three* calls is due to battery trouble or ignition failure. Take a look at these figures!

OFFICIAL FIGURES

All breakdowns during 1946	**32,325,000 calls**
Battery trouble	**5,789,000 calls**
Ignition failure	**4,000,000 calls**



To *you*, these nearly 10 million calls due to battery and ignition failure mean it pays well to "Check the wire on every job!" It means more money for you . . . means you enjoy increased customer good will because you keep motorists out of trouble. So, remember! *Check the wire on every job!*

CRESCENT

Wiry Joe

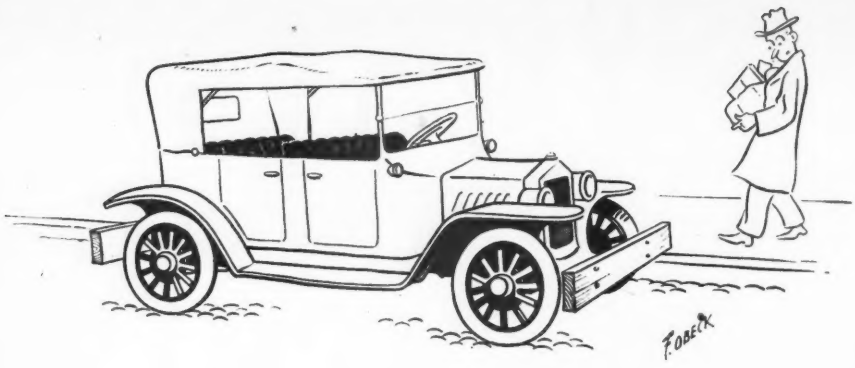
AUTOMOTIVE CABLE

MANUFACTURED BY

THE CRESCENT COMPANY, INC.

PAWTUCKET, RHODE ISLAND





Automobile Old Timers Form Pennsylvania Council

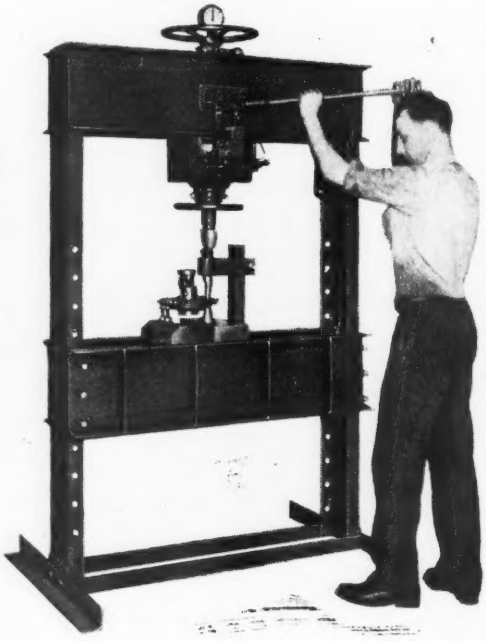
In furtherance of a program to form state units in various sections of the country, members of the Automobile Old Timers residing in Pennsylvania organized a State Council at a luncheon held in Philadelphia June 11.

J. Maxwell Smith, president of the Keystone Automobile Club, a director of the national body, presided as chairman of the organization committee. His associates included John H. Fassitt and William Phillips, president and secretary, respectively, of the Philadelphia Automobile Trade Association; F. E. Ballantyne, general manager, Automobile Club of Philadelphia, and Julian Chase, directing editor, automotive division, Chilton Company.

President George Conrad Diehl and Secretary Frederick H. Elliott of the Automobile Old Timers were guests upon this occasion. President Diehl, a past president of the American Automobile Association, outlined the aims and accomplishments of the pioneers group and stated that the Pennsylvania Council would be the seventh state unit affiliated with A.O.T.

At the conclusion of the luncheon the organization was completed with the election of the following officers: Charles S. Snyder, honorary president; John H. Fassitt, president; J. Maxwell Smith and Herman P. Schade, vice presidents; and William Phillips, secretary.

Every GARAGE AND REPAIR SHOP



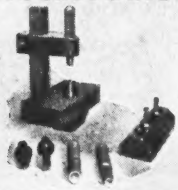
—needs this DEPENDABLE PRESS

Here's a sturdy easy to use arbor press that will save you time and money. Available in 50- and 70-ton capacities, it finds wide use for removal and replacement of bearings, sleeves, and other press fit parts, as well as for general bending and straightening.

All Dake presses are built with massive frames to handle extreme pressure safely. The hydraulic work head is a self-contained unit that can be moved along the top channel. The screw-type ram can be advanced quickly to speed operation.

Send coupon below for full information on this and other useful Dake presses.

ACCESSORIES



No. 1-RF Ring Gear Riveting Attachment. Upsets rivets cold so holes are completely filled.



No. 35-20 Dial Test Indicator with Bracket and Arm for accurate testing during straightening. Sensitive to .001 inch.



No. 38-25 Testing Attachment. Supports work up to 64 inches long for straightness tests with the Dial Test Indicator.

DAKE ENGINE COMPANY
GRAND HAVEN, MICHIGAN

● Dake Engine Company
626 Seventh St., Grand Haven, Mich.

Please mail me a copy of the latest Dake Arbor Press Catalog.

Name_____

Title_____

Company_____

Address_____



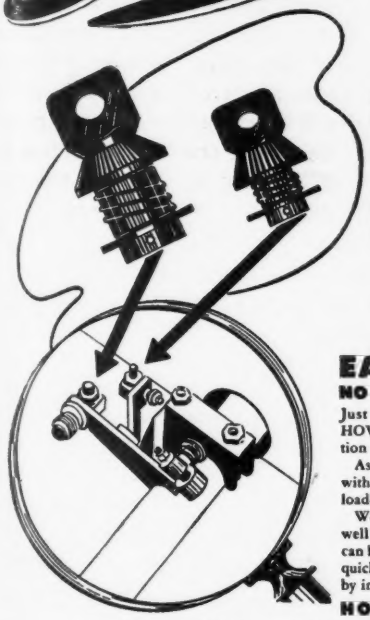
"That one got away."

STOP THAT SHIFT LEVER RATTLE

WITH GENUINE HOVE ORIGINAL

SHIFT-TITE SELF-ADJUSTING SWIVELS

for CHEVROLETS



EASY TO INSTALL

NO MACHINE WORK NECESSARY

Just remove worn swivels. Replace with HOVE SHIFT-TITES. Adjust to same position as old swivels.

Assure quick, positive, stay-in-gear shifting with SHIFT-TITE, the swivel with spring loaded cones that remove rattles.

Worn swivels cause shift lever to rattle as well as bounce out of gear. This condition can be dangerous and annoying—but it can be quickly, easily, and inexpensively corrected by installing

HOVE SHIFT-TITE SWIVELS

Ask Your Jobber—He has them. If not, write us.

Also ask about SPARK-O-LINER—
Your protection against costly comebacks.

HOVE ENGINEERING CO.
1103 So. 6th St. Minneapolis 4, Minn.

PERFECT PARTS Mean Extra Profits!

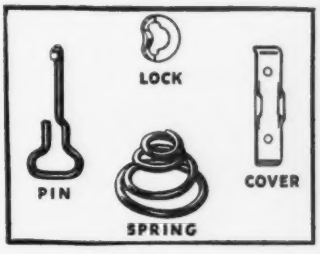


"PERFECT" BRAKE SHOE HOLD-DOWN PARTS

Three parts—Pin, Spring and Cup, for assembling complete unit. Offered in 4 Assortments, small and large. Also in convenient "Kar-Kits" as illustrated.

"PERFECT" Brake Shoe Parts to Fit All Chevrolets 1936-42

Offered in 3 Assortments, small and large



From your jobber. Write us for particulars.
IMMEDIATE DELIVERIES
Perfect Parts, Inc., 55 Amsterdam Ave., New York 23, N. Y.

Get a line on the CAMPBELL LINE NOW!

The exclusive, patented* saw-toothed lugs of Campbell *Lug-Reinforced* Tire Chains dig right into ice and snow for the grip that means better traction—safe starts and stops under the worst conditions. Tough, long-wearing steel and one-piece construction mean increased chain mileage. *International Chain & Mfg. Company, York, Pennsylvania.*

*U. S. Pat. No. 2,093,547—Canadian Pat. No. 223,568



Chevrolet Defers Light Car Program Indefinitely

GM has again deferred its Chevrolet light car project for an indefinite period. According to a company announcement, the present situation in regard to materials, equipment, and new plants is such that all available facilities and materials will be used to press production of the current Chevrolet model. Prior to the official confirmation of the deferment, it was reported in Detroit that the project had definitely been abandoned and that part of the personnel had been discharged.

It is known that G.M. has pretty well set the design of the proposed car, which is said to be noticeably smaller overall than the conventional models. Inside dimensions, however, are reported to be pretty well in line, which would indicate a swing to the wider body styling already here in Kaiser-Frazer and Studebaker. Mechanical features are clouded in secrecy, although the engine is known to be quite small.

A source close to G.M. reports that a rigid cost accounting has been made on every piece going into the car and on certain possible changes that might be made, so that the exact cost is known. He estimated that a recent report stating the car could be built for about $200 under the present Chevrolet was "about right." He added that simplification of parts in order to reduce the number of pieces and to lower production costs has been carried out intensively throughout the project.

While the present short supply of materials and other difficulties inherent in getting into production of a new product is undoubtedly a logical reason for the present deferment and two preceding ones, there are said to be some other considerations. For one thing, the project has been delayed so long now that the advantage of introducing it and getting the product established during the booming buyers' market probably is gone. It would have to compete with the present Chevrolet price class at a time when dealers may be giving better trades. Another consideration is that there is some doubt about the wisdom of introducing a lower priced car with more advanced styling and engineering features than currently are found on higher priced cars. Then there is the cost of building, tooling, and other expense of getting into production, which has been estimated at close to $100 million, a very sizable expenditure for even such a corporation as G.M. And finally, it may be that the estimated $200 differential may not be considered enough to take the car out of competition with the regular Chevrolet.

If and when the project will be revived is in the realm of pure speculation. It is known that the manufacturing organization, which remained intact after the first two deferments, is being shifted to other places in G.M., at least in part. That move without question removes some of the overhead expense, but it also could be a hint that chances of the project being revived are not too good, at least for the foreseeable future.

To Keep the Business

KEEP THE BUSINESS CLEAN

with

HARCO
REG. U.S. PAT. OFF.

A Complete Line of Automotive Cleaners

Made by a company with 36 years of know-how in the manufacture of cleaners and soaps, including the famous HARCO Green Bar Soap. The line includes—

CARBOSOLVE A triple-action carburetor cleaner and carbon remover. Cuts cleaning time in half. Does not pit, corrode or damage metals. Meets U. S. Government specifications.

GREAS-OFF The all-purpose degreasing solvent. Highly concentrated and emulsifiable.
Brush it on . . . Hose it off.
For cleaning engine blocks, motor parts, used car chassis, radiators, etc.

CAR WASH A revolutionary non-alkaline formula in powder form. Saves time and does a better job because it is streakless and requires no wiping.

DRIVEWAY CLEANER Quick acting powder compounded for fast, easy cleaning of concrete, asphalt and wood floors, driveways and lube pits.

Contact your automotive wholesaler today. He will be glad to give you more details about HARCO'S complete line of cleaners.

When you have a cleaning problem, think of HARCO Cleaners.

HARLEY SOAP COMPANY

Philadelphia 37, Pa.

KEEP THE BUSINESS CLEAN

Modernize your Lubrication Department
Centralize ALL Service Outlets
with LINCOLN
LUBRICATING EQUIPMENT!



IN building profitable lubrication business, the fundamental problem is to gain and hold customer confidence.

Lincoln Engineers, recognizing this fact, have designed and built a complete line of lubricating equipment engineered to render clean, fast, efficient service—service that impresses the customer and brings him back.

The above installation is typical of the matchless beauty and styling that is designed into all Lincoln Lubricating Equipment. This group consists of a Standard Wall Battery, a Servmobile, Drainmobiles and a Seven unit Cabinet Lubreel providing an outstanding centralized method of dispensing all types of services—Chassis, Gear, Motor Oil and Air. Ask your Wholesaler for complete information.

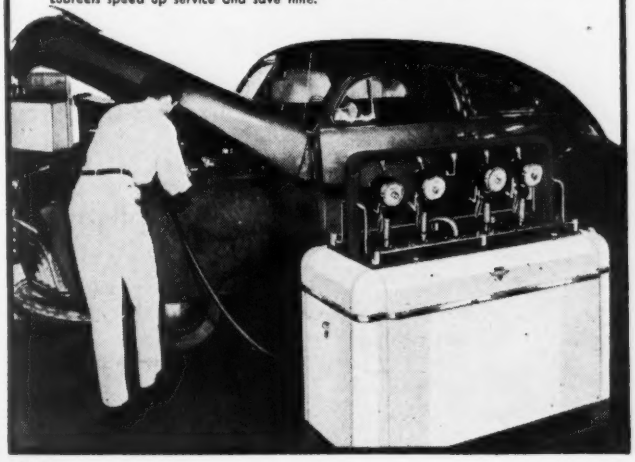
Trade Names: Servmobile, Drainmobile, Lubreel—Reg. U. S. Pat. Off.

LINCOLN

Pioneer Builders of Engineered Lubricating Equipment

LINCOLN LUBREELS

Lincoln Cabinet Lubreels are available in 2, 3, 4, 5 and 7 reel units for dispensing motor oil, chassis and gear lubricants. Model 2751-C illustrated below is designed to dispense 5 different grades of motor oil direct from the original refinery barrels to the crankcase. Air-motor pumps and original refinery barrels are placed in out-of-sight location and oil is piped direct to the Lubreels. All hose assemblies are mounted on individual, air-operated, automatic retracting reels. Each control valve is equipped with an easy-to-read totalizing meter which accurately registers the amount of oil being dispensed. Lincoln Lubreels provide the newest, most modern method of dispensing motor oil without the use of measures, funnels, can openers or other dirt-catching accessories. Oil is kept refinery pure—no waste . . . no mess. Lubreels speed up service and save time.



A47-13

LINCOLN ENGINEERING COMPANY
5701 Natural Bridge Ave., St. Louis 20, Mo., U. S. A.

BMB provides further

By any standard, day or night, NBC is America's No. 1 Network

...and the higher the standard, the greater is NBC's superiority

For the first time, a research organization supported by the entire industry has measured—on a uniform basis—the number and location of all radio families comprising the weekly listening audience of each U. S. radio station and network.

In those counties where 75% or more of the radio families listen to any of the four major networks "one or more times a week," NBC leads by a wide margin—ranging from a 33% advantage over Network "A" at night to a 322% advantage over Network "C" in the day.

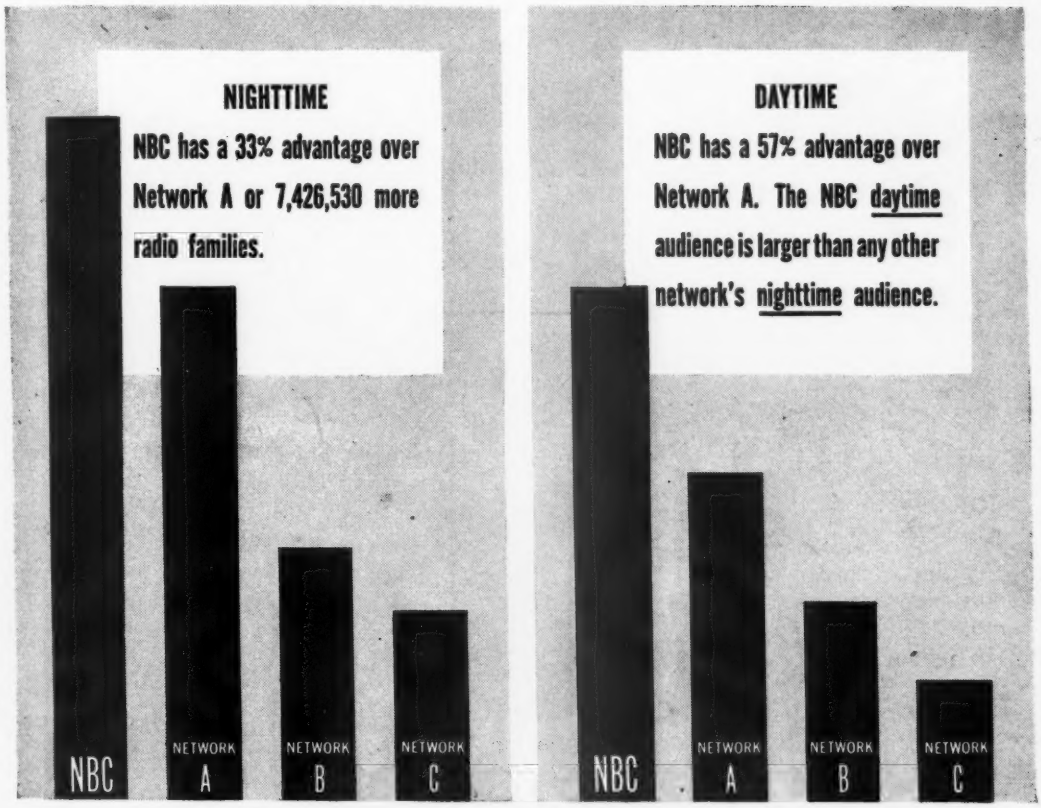
The charts opposite present a comparative picture of listening based on this high standard of *75% and over*—a much more significant basis for comparison than any lower level. However, even on the minimum basis of 10%, NBC has a dominant advantage over all other networks.*

How much more? Audience figures released by BMB are based on listening "one or more times a week." How much more do people actually listen to NBC? Facts on that subject and many others are included in NBC's detailed booklet on the BMB survey to be issued shortly.

**Complete results of this survey are contained in "Network Area Report" recently published by the Broadcast Measurement Bureau. The only total audience figures shown in this report are based on the level of 10% and over: Nighttime; NBC—31,127,940; Network "A"—27,080,570; Network "B"—22,056,690; Network "C"—19,161,830. Daytime; NBC—27,888,770; Network "A"—25,261,730; Network "B"—21,557,990; Network "C"—19,160,260.*

AMERICA'S NO. 1 NETWO

proof...



Audience in counties where 75% and over of the radio families listen "one or more times a week."

	NIGHTTIME		DAYTIME	
	AUDIENCE	% OF TOTAL U. S. RADIO FAMILIES*	AUDIENCE	% OF TOTAL U. S. RADIO FAMILIES*
NBC	30,116,240	89%	22,856,940	67%
Network A	22,689,710	67%	14,558,050	43%
Network B	12,716,480	33%	9,003,670	26%
Network C	8,499,130	25%	5,421,670	16%

**Total radio families January 1946—33,998,000 as estimated by BMB. A more recent survey indicates that as of January 1947 there were 35,900,000 radio families or 93% of all U. S. families.*

. . . the National Broadcasting Company

A Service of Radio Corporation of America

HALLOWELL

SHOP EQUIPMENT OF STEEL
designed for UTILITY
built for LONG LIFE



Fig. 732
Pat'd and Pats. Pending.
Drawer is extra.

These sturdy, ready-made "Hallowell" Work Benches of Steel assure years of utility, at attractive prices. More than 1300 combinations . . . interchangeable sections . . . five heights and widths and seven lengths provide a wide choice for your particular requirements. "Hallowell" Work Benches of Steel stand firm and rigid without costly bolting to the floor . . . can be easily moved and joined end-to-end to form a continuous work bench of any length.



Fig. 2197

The "Hallowell" Foreman's Desk of Steel is of all welded construction—no weak or wobbly joints. It has a smooth writing surface—just the right height—just the right slant . . . with conveniently located pigeon holes and drawer for easy filing of papers, cards, records, etc.

Write for your copy of the "Hallowell" Catalog. It describes, in detail, this rugged line of Shop Equipment of Steel.

"Unbrako" and "Hallowell" Products are sold entirely through Industrial Distributors

OVER 44 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.

JENKINTOWN, PA. BOX 561

BRANCHES: Boston, Chicago, Detroit, Indianapolis, St. Louis, San Francisco

Fisher Craftsman's Guild Competition

New York, Detroit and Oakland, California, were named today as state and regional judging centers for model automobiles and Napoleonic coaches entered in the 1947 Fisher Body Craftsman's Guild competition.

W. S. McLean, Secretary of the Craftsman's Guild, announced that judging of models entered from the east coast area will begin June 21 at the R. H. Macy & Company store in New York. Models from the mid-west will be judged at the General Motors building in Detroit starting June 23, and those from western states will be judged at the H. C. Capwell store in Oakland, beginning June 23.

Names of state and regional winners will be announced at the three centers early in July. Thirty-six regional winners—18 in the model car design competition and 18 in the coach competition—will come to Detroit August 19 through 22 for the Craftsman's Guild national convention and to compete for eight university scholarships ranging in value from $2,000 to $5,000. In each state and the District of Columbia, winners will share in 24 cash awards, ranging up to $100 for the best car and $125 for the best coach.

Stambaugh Heads Monroe Aftermarket Sales

Charles S. McIntyre, general sales manager of the Monroe Auto Equipment Company, has announced the appointment of Thomas H. Stambaugh, a leading automotive sales, service and distribution executive for more than 20 years, as sales manager of the company's expanded aftermarket division.

Mr. Stambaugh comes to Monroe from the Hudson Motor Car Company where he spent 13 years as parts and accessory merchandising manager and later director of national servicing operations. In his new position at Monroe, where he succeeds John Black, retired, he will have charge of sales of Monroe hydraulic shock absorbers, Monroe hydraulic easy-ride truck and tractor seats, tire pumps and other products.

AMEROID AMEROID

Coming next month

An IMPORTANT ANNOUNCEMENT from E. F. DREW & CO., INC.

regarding



MORE SALES! HIGHER PROFITS! FOR YOU—

Watch for it!

AMEROID AMEROID

NSPA Manual Presents Plan for Wholesalers

The National Standard Parts Association has released to its membership another important manual for wholesaler executives. This is a 20-page booklet entitled "Shop Management." Produced by the Association's engineering and operations department, it is one of a series on business control in the field of automotive distribution.

In the current manual, a shop control method is presented along with recommended standard forms for a service shop order, a machine shop work order, and a material requisition. All procedures are described in detail.

The method proposed by NSPA is easy to operate and produces desired information immediately and effectively. It is devised to require little, if any, extra clerical help, and will fit into the customary functions of shop management. It requires a minimum amount of supervision.

The NSPA method of shop control provides management with all the necessary data consistently, and on time, to do the most good in feeling the pulse of shop performance. The information provided is necessary and indispensable for knowing what to do and when to do it, in adjusting and correcting the affairs of the shop in good time.

Under the Association's proposed method, shop control is administrated by a shop manager. It is either a part time job or a full time job, depending upon the volume of shop business. The shop foreman is responsible for the functional direction of shop employees. Because the functions of the shop are purely technical, it is recommended that the shop foreman should not be given the responsibility of administrative management. It is pointed out that the shop foreman's job is machinery, tools and mechanics, while the shop manager (a department executive) is one concerned with shop sales, earnings and profit.

Now Ready

THE NEW, IMPROVED VALVE GUIDE REAMERS by Reasor



An advance in design brings you new tools of precision for precision reaming of valve guides. *Reasor Valve Guide Reamers* have *left-hand spiral flutes, right-hand cut* . . . affording positive cutting action and exceptionally smooth and accurate holes. Selected high-speed steel assures longer life for the cutting edge. *Reasor Valve Guide Reamers* are approved service equipment for many large manufacturers of trucks and farm equipment . . . also for some of the armed forces.

For Price List, see your local jobber or write Reasor Manufacturing Co., Dept. M-7, St. Charles, Illinois.

IMMEDIATE DELIVERY On All Popular Sizes

RMC

REASOR MANUFACTURING CO.
ST. CHARLES, ILLINOIS

McQuay-Norris Opens Two New Factory Branches

A new Factory Branch and Warehouse was opened at 690 Murphy Avenue, S. W., Unit 7, Building B, Atlanta, Georgia, on June 10, 1947, by the McQuay-Norris Manufacturing Company.

A new Factory Branch and Warehouse was opened recently at 3222 "H" Street, Philadelphia, Pennsylvania, by the McQuay-Norris Manufacturing Company.



"I'm washing someone's back."

Profit with Purolator



HERE is a Purolator Sales-Maker Assortment that puts you in the oil filter business and puts a Profit in your pocket. Every time you do a lube job . . . every time you change oil . . . change the oil filter element . . . and install a genuine Purolator Micronic Oil Filter.

This sensational Purolator Sales-Maker Assortment is complete with the sensational Purolator Micronic Oil Filter fast-selling, popular-car elements, complete filter installations and a powerful kit of forceful action-compelling sales promotion display material.

Here's the *best* news! This assortment gives you a tremendous profit on the material alone. If you add the labor charge for filter installation you've got a sweet profit on a line that is 100% ahead of competition.

PUROLATOR PRODUCTS, INC. NEWARK 2, N. J.

PUROLATOR
MICRONIC OIL FILTER
KEEPS OIL FREE FROM ABRASIVES

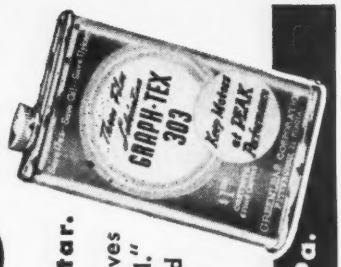
In Canada: PUROLATOR PRODUCTS (CANADA) LTD. Windsor, Ontario

"I use Graph-Tex 303 -"

says GEORGE SELZER — well known international racing star.

"It reduces friction --- It cuts down heat --- makes my oil hold up --- gives me "out ahead" performance. I wouldn't race without it in my gas and oil." Motorists now getting peak performance; Fleet Owners who check on saved oil and gas consumption, feel the same. Graph-Tex is the perfect 3-film lubricant. Some profitable territories for representation still open. Write to

GREENLEAF CORPORATION 727 Penn Ave., Pittsburgh 21, Pa.





American Auto Industry Suffers Set-Back Abroad

Hundreds of factories now springing up in Europe testify to American manufacturers' near-fatal delay in taking advantage of the export market.

"Many of these factories would never be built if Europe were able to buy American manufactured goods in sufficient quantity to meet her needs," according to Olaf Haug, Borg-Warner International Corp's newly appointed automotive sales representative in continental Europe.

"American industry has been too slow in allocating a fair share of its production to overseas markets. As a result, we have actually forced Europe to compete with us in many fields where there would have been no competition if we had played our foreign trade cards right."

Mr. Haug, who soon will return to his Oslo headquarters, believes heads of American companies should go personally to Europe to look after their own interests and to "view first-hand the diversified foreign market that is open to us."

Holland, which traditionally has given preference to American cars, still is the brightest spot in our automotive export picture, Mr. Haug said. Portugal and Switzerland, who prospered during the war, also are good markets for American automotive manufacturers. Numerous orders for our automotive equipment also are being slipped underneath the iron curtain by Soviet-dominated Bulgaria and Yugoslavia. Belgium is described as only a "fair" trade prospect.

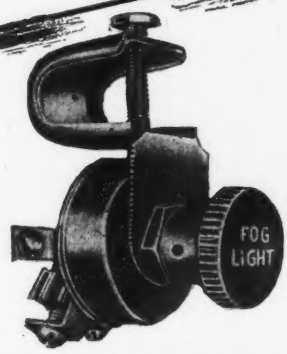
Norway should be well off economically and a good customer within two or three years, Mr. Haug predicted. It is mainly a matter of her regaining the maritime and railroad facilities of which she was deprived by her German conquerors in wartime.

"Sweden has 'gone back' economically," Mr. Haug said. "Her imports are very severely curtailed by the commercial agreement Soviet Russia imposed on her in the closing months of the war. American business men should bring pressure on her to respect her old trade agreements with them."

FOR SAFETY'S SAKE



Insist ON DEPENDABLE COLE-HERSEE ELECTRICAL EQUIPMENT



No. 2416 For SINGLE FILAMENT FOG-LIGHTS operating independently. Two positions, three terminals. Tail light operates simultaneously. Illuminated, fused; tan serrated knob No. 8115 imprinted "FOGLIGHT" and bracket. No. 2422 same — except fused but non-illuminated.



ROTARIAN — Heater Switch embodying perfect mechanical and electrical operation. With bakelite knobs in several colors.

Heavy Duty	Coil
No. 6870 Brown	No. 6935
No. 6871 Seafoam	No. 6936
No. 6872 Red	No. 6937

COLE-HERSEE CO.
Old Colony Ave., Boston 27, Mass.

ARVIN

THE BEST-KNOWN NAME IN

CAR HEATERS

For customer-satisfaction and dealer profit

ARVIN LEADS... LEAD WITH ARVIN



Dominant CONSUMER advertising
More than 100,000,000 reader impressions during peak of heater selling season in leading magazines . . . Saturday Evening Post, Country Gentleman, Successful Farming, Collier's.

THE dependable HEATER LINE
EASY TO SELL, easy to install, *Stays* sold! Plenty of *quick* heat for any trip.

Sales-Starting DISPLAYS & FOLDERS
Window and counter displays, streamers, handout and mailing folder, catalog and specification data for all cars and trucks . . . everything you need to get the installation

See your [illegible] jobber, now.

ARVIN . . . the name on profit-building products from

NOBLITT-SPARKS INDUSTRIES, INC., COLUMBUS, INDIANA

Don't buy any medium-duty steam cleaning machine until you see the sensational low-priced

NEW MODEL C

KERRICK KLEANER

$437.50 FULL PRICE



NO EXTRAS TO BUY

MAIL THIS COUPON AND GET THE FULL STORY ON THIS NEW PROFIT BUILDER

Clayton Manufacturing Co. M-7
El Monte, California

Please send full information on the new Model C Kerrick Kleaner:

Firm_____

Name_____

Address_____

City_____

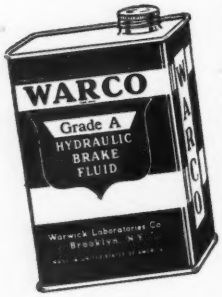
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WARCO

The De Luxe **CHEMICAL LINE**

Is YOUR "Chemical" Business Increasing in Volume?

BE fair to yourself. Look into your records and find out if your "Chemical" business has made a substantial gain in volume during the past year. Don't be satisfied with a few now-and-then jobs. Make your shop fairly hum with "chemical treatment" jobs and allied services. YOU CAN DO IT—WITH THE WARCO LINE, AS OTHER SHOPS ARE DOING!



Warco Laboratory Tested Superquality assures satisfactory results on every class of work. Creates confidence and good will. Makes permanent friends of casual customers. Brings you repeat business. And piles up volume and profits for you in a BIG WAY!

WARCO HYDRAULIC BRAKE FLUID
Passenger Car & Heavy Duty Types

WARCO MO-TUN-UP

WARCO PENETRANT

WARCO HYDRAULIC JACK OIL

WARCO RUB-A-LUBE

WARCO RADIATOR SOLDER

KNEE ACTION SHOCK OIL

ETC., ETC.

Don't take a substitute for Warco Superquality Automotive Chemicals. See your jobber—Today.

WARWICK LABORATORIES CO.
2961 Atlantic Ave., Brooklyn, N.Y.

Tire Shortage Over

Production of automobile casings and inner tubes reached a new high rate in early 1947 with resultant signs that the shortage of tires is over, according to the Rubber Industry Report for May, just released by the Department of Commerce.

During the first quarter of this year consumption of new rubber in the United States set a new high record of 98,939 long tons monthly compared with the previous all-time peak of 94,602 tons monthly in the last quarter of 1946, the report states.

Imports of natural rubber were very high in January, but were lower than consumption in February and March. Natural rubber accounted for 43.5 percent of January-March consumption compared with 42 percent for December and 39.4 percent for the fourth quarter of 1946. Stocks on hand at the end of March were 280,844 tons compared with 237,467 tons at the end of 1946.

Discussing the tire situation, the report states:

"Manufacturers' inventories increased in January from the December low, and again increased in February, both in passenger and truck casings, and even more in inner tubes. Shipments declined somewhat despite larger takings of tires for original equipment, and high exports. Shipments for replacement declined quite sharply.

"This decline is in line with normal trends at this period, but has as a background the fact that at the end of 1946 the automobiles in use in the United States had a higher percentage of new rubber (tires produced or retreaded within the year) than ever before in the history of the industry. The prospect for replacement sales in the next year or two depends greatly on the durability under operating conditions of the tires made during the past two years."

The Line of Least Resistance



SPECIAL SERVICE CABLE

Generator lead cable, acid proof charging cable, and multiple conductor trailer cable, are but a few of the many special cables in this complete line . . . These products, like all others carrying the Whitaker label, offer least resistance to sales —and the least resistance to conducting the full flow of current.

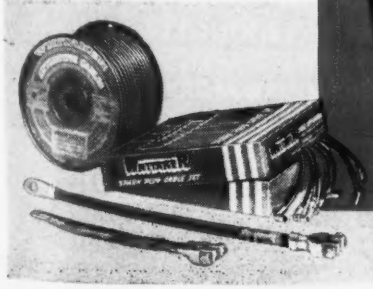
PRIMARY CABLE

In addition to full line of special service cables, Whitaker offers a full range of gauges in both single conductor and two-conductor primary cable. Tinned copper wire conductors are insulated, braid covered and lacquered.

SPARK PLUG CABLE

On spools, or in sets, Whitaker Spark Plug Cable has characteristics which offer maximum resistance to the deteriorating effects of motor heat, grease, hot oil, moisture, cold, abrasion, and corona . . . Available through Whitaker jobbers everywhere.

WHITAKER LABEL
Assures Quality Cable



WHITAKER
CABLE CORPORATION

KANSAS CITY, MO.
ST. JOSEPH, MO.
PHILADELPHIA
OAKLAND

Pioneers and Leaders in Automotive Cable Products Since 1920



TO
HELP YOU
SERVICE FASTER

HALLOWELL

"AUTO KIT"
with interchangeable tools

A carefully selected assortment of high-grade, precision-made alloy steel tools—Clutch Head bits, Flat bits, Phillips bits, and a Tapered Reamer—all in the tread-grip, hollow, red plastic handle that is sized to fit comfortably in the palm of your hand.

Swivel head with bit-chuck . . . locks securely in any one of five positions . . . enables you to reach "hard-to-get-to" places more easily, permits the application of greater leverage.

These handy, time-saving Kits . . . available in two sizes, #20 and #40 . . . are obtainable at Dealers throughout the country. If your Supplier does not carry them, or he is sold out, send us his name, along with yours, and you will be taken care of promptly.

An Ideal Gift,
Premium or Prize.

Kits: Pats. Pend.
Over 44 Years in Business

STANDARD PRESSED STEEL CO.
JENKINTOWN, PENNA., BOX 561

Globe Hoist Catalog

In its first post-war catalog, the Globe Hoist Company, of Des Moines, Iowa, and Philadelphia, Penna., features over 30 models of hydraulically and electrically powered lifts, designed for installation in garages, service stations and fleet repair shops.

Specially featured in the catalog are Globe's new 2-post hoist-type lifts, designed for service and overhaul work. Also included are the heavy duty bus and truck type lifts, formerly included only is in a special catalog. Copies are available from the manufacturer, Mermaid Lane at Queen St., Phila. 18, Penna.

SAF-T-AID Anti-Glare Visor

A new night driving safety device, known as SAF-T-AID, which the manufacturers claim is capable of absorbing 90 per cent of the glare of approaching headlights, is being introduced by the Edro Corporation of New Britain, Conn. Made of tinted plastic and attached to the windshield with a rubber suction cup, the SAF-T-AID is designed to shade the driver's eyes from the glare of night traffic. The driver does not look through the SAF-T-AID, but to one side and below it, giving him a clear view of the road at all times. For daytime driving the SAF-T-AID swings upwards or downwards out of the way but can be easily returned to the night driving position.

This unit may be imprinted for premium and good will advertising. For the retail trade the price is $2.00. Particulars may be obtained from the manufacturers, the Edro Corporation, 35 Wakefield Court, New Britain, Conn.

Ask about the

FOX

RAPID
BATTERY CHARGER

FOX PRODUCTS COMPANY
PHILADELPHIA 41, PA.

Make
BODY SOLDERING
Faster . . . Easier
with a
BINGO SOLDER KIT



Just slip a Bingo Solder Tip assembly, using the Bingo No. 2 tip, over the tip of your welding torch and you're ready to do a fast job of body soldering. Use of the No. 1 tip quickly converts the Kit for light soldering. *Uses Acetylene Only.*

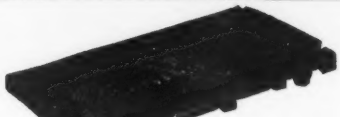
COMPLETE KIT Consisting of body and two tips. $2.75

JOBBERS! Write for complete merchandising plan.



BEAVERDELL Company
4465-67 LINCOLN AVE., CHICAGO 25, ILL.

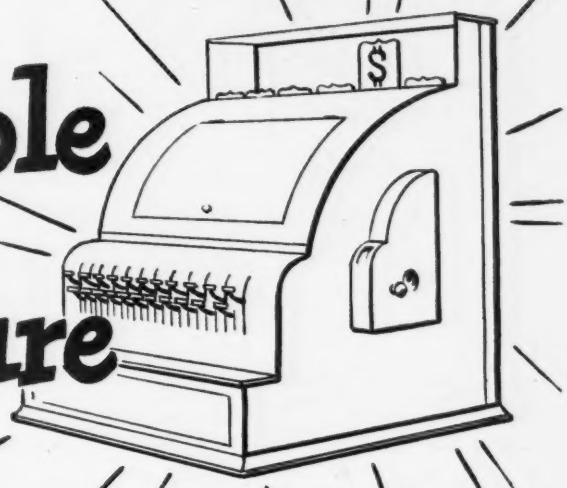
for SAFETY
REFLECTORS • LAMPS • FLARES
GROTE
GROTE Manufacturing Company, Inc. Bellevue, Ky.
Automotive Sales Office: Moorestown, N. J.



Smash-Proof
CREEPERS
Sold by all leading jobbers
HULBERT MANUFACTURING CO.
Ashtabula, O.

THE ANDREWS LINE . . .
Your Best Electrical Connection
CUSTOMER SATISFACTION SINCE 1921
Andrews
MANUFACTURING CO
ST. LOUIS, MO.

You get the tools you need to build a more profitable and more secure Automotive Service Business



MARKET CONDITIONS are changing—and fast. The day of "anything sells" is rapidly dying, if not already dead. To build lasting profit and real security into your business, you need the kind of sound and tested selling "tools" that a United Motors franchise gives you.

The Parts Your Customers Prefer

United Motors lines are all original-equipment parts on the country's leading cars, trucks and buses. They are known, respected and preferred for quality and dependability by millions of motorists.

When you use and feature these United Motors lines you gain the confidence of America's greatest parts and service market: Delco-Remy Starting, Lighting and Ignition—Delco Batteries—Delco Hydraulic Brakes—Delco Radios—AC Fuel Pumps, Gauges and Speedometers—Delco Shock Absorbers—Guide Lamps—New Departure Ball Bearings—Klaxon Horns—Hyatt Roller Bearings—Harrison Radiators, Thermostats and Heaters—Inlite Brake Lining.

The Support Your Business Needs

Better lines are only *one* advantage of a United Motors franchise. You also get experienced, helpful counsel for your business problems . . . individually planned sales and merchandising programs to help you sell . . . expert, easy-to-use service information . . . complete parts lines for all models . . . and national advertising support for your United Motors sign.

These selling "tools" have proved their value for thousands of prosperous United Motors dealers. Why not use them to build a better future for yourself?

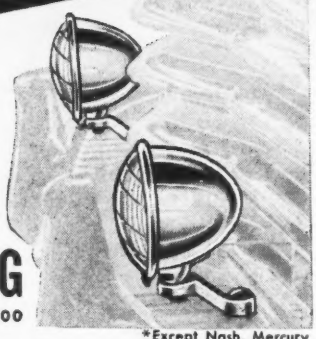
Your United Motors distributor will show you how you can start with one or more United Motors lines and add others as your business grows. Call him today for a friendly discussion of your situation—or write direct and we will arrange an interview for you.

UNITED MOTORS SERVICE
DIVISION OF GENERAL MOTORS CORPORATION
GENERAL MOTORS BUILDING, DETROIT 2, MICHIGAN

UNITED SERVICE MOTORS

• Watch Teleoptic National Advertising •

They Fit Your '47 Car* and Match Its Beauty!



FOG KING
SERIES 100
by Teleoptic

*Except Nash, Mercury Lincoln, Studebaker

• For greater visibility—they're big in size. • For Beauty, they're chrome plated. • For durability, copper shell and stainless steel door. • Sealed beam or silvered type • White or amber.

DEALERS: You can order your display direct from factory. Only $4.60 plus postage including one light. Use your letterhead.

BUY FROM YOUR DEALER OR JOBBER
Prices Fair-Traded

THE Teleoptic Company
RACINE, WISCONSIN
• THIS AD IN COLLIER'S JULY 5th •

CLUTCH FACINGS • RIVETS
BRAKE SHIM STOCK • RELINING EQUIPMENT
HYDRAULIC BRAKE PARTS • BRAKE FLUID



SOUTHERN
FRICTION MATERIALS CO.- CHARLOTTE, N.C.

Fixing Flats

(*Continued from page* 64)

For example—suppose the recommended pressure were 32 pounds and before inflation the pressures of the tires were 24, 27, 28, 29. Only the tire with a pressure of 24 pounds would be suspected of being punctured. The other tires would have lost air through the normal manner.

The system, tried out at many different car dealers, independent repair shops and filling stations, proved conclusively that one out of every three cars had a puctured tire.

Incidentally, it should be emphasized that the tire valve is only a check valve and it is the valve cap which has the job of actually sealing the valve stem and preventing leakage. It is, therefore, of the utmost importance that valve caps be used.

Perfect Circle Addition Will Speed Delivery

With the near completion of the new addition to Perfect Circle Corporations Warehouse and Shipping Plant at Hagerstown, Indiana, jobbers and dealers can soon expect improved shipping service from the factory.

Prior to the building of the new wing, space available for packaging, shipping, and warehousing was overloaded by handling many times more rings per month than the number for which it was designed.

The adidtional floor space will speed up handling by creating more operating stockroom capacity, permitting centralization of supplies, and making it possible to arrange departments for more efficient operation.

ignition-fritz

For Auto Owners, Mechanics, Truck Drivers, Farmers and all gasoline engine users. Sells on sight.



LITTELFUSE Incorporated
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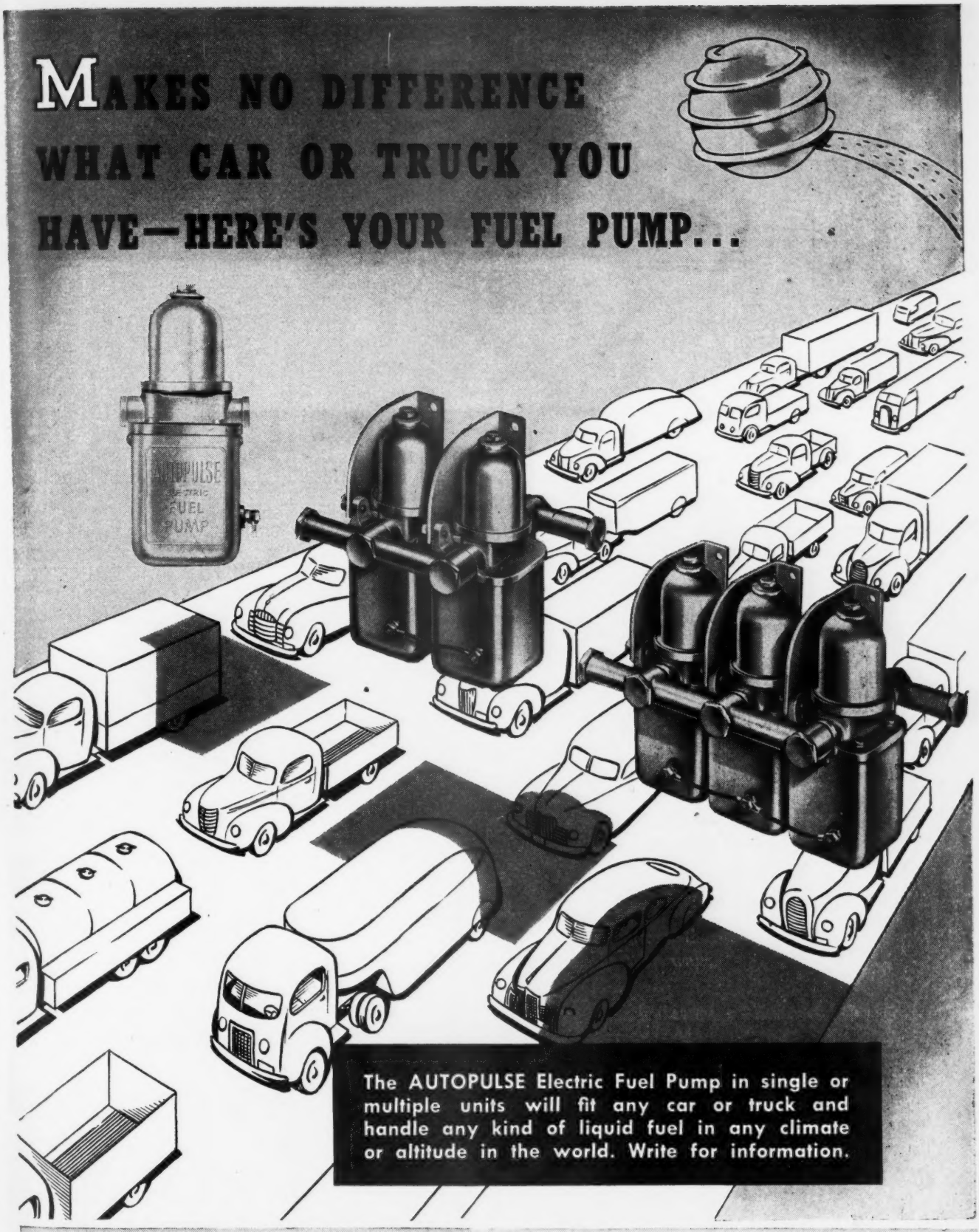
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MAKES NO DIFFERENCE WHAT CAR OR TRUCK YOU HAVE—HERE'S YOUR FUEL PUMP...



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New scientifically designed, precision made, Thermo-Formed Cords Piston Rings now available for all motor vehicles. Exclusive patented Concave Steel Segment Rings in Cords combination sets stop cylinder wear—save gas and oil

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Whether on business or pleasure-bent, make this "Goodwill Hotel" your headquarters. Located right in the center of everything . . . a block east of Woodward Avenue on Elizabeth Street, overlooking Grand Circus Park, Hotel Wolverine is accessible to all sections of the city.

500 rooms . . . each with tub and shower. Good food. Ample parking space; garage service also available.

Home of THE TROPICS . . . most unusual night spot in Detroit. Romantic South Seas atmosphere.



HOTEL
WOLVERINE
"The Goodwill Hotel"
RATES FROM
$2.50 SINGLE · $4.00 DOUBLE

Trailer Refrigerators

Carefree refrigeration on a fishing trip and air conditioning to cool off summer trailer travels are becoming available to trailer owners.

With trailer production mounting to 100,000 a year, rapid progress is being made in the development of both mechanical refrigerators and air conditioners especially adapted to trailer use, the Refrigeration Equipment Manufacturers Association reports.

Already on the market are small-sized mechanical refrigerators specifically for trailer use. Some of them are built for hook-ups to electric power lines in trailer camps or wherever there is an available supply of electricity; others are operated by bottled gas or kerosene, and trailer owners are beginning to use small gasoline generators which provide electricity for refrigerator as well as lights.

Improved insulation in new trailers is making air conditioning more and more practicable, according to refrigeration manufacturers, who are cooperating with the trailer industry in developing suitable structural designs in the trailers and in adapting the new "packaged" home air conditioners to trailer applications. Plans for custom-built trailers already provide for special air conditioning equipment.

The trend toward more compact, yet more spacious, home refrigerators also is extending to units for trailers. Manufacturers are featuring six-cubic-foot models which utilize about the same floor space as prewar models of four cubic feet. Included in the six-cubic-foot trailer models is space for around 15 pounds of frozen foods.

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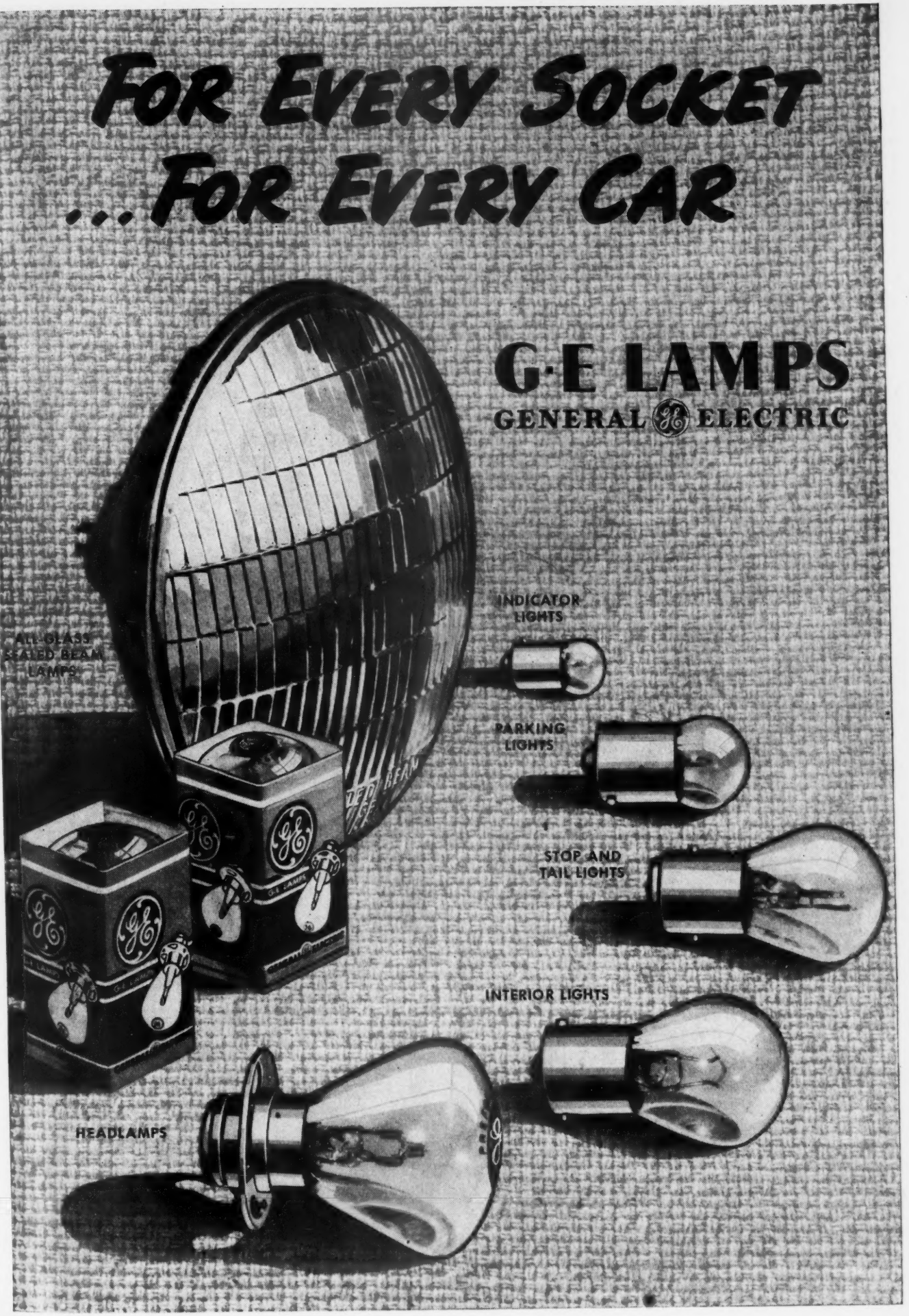
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FOR EVERY SOCKET ...FOR EVERY CAR

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NEW LITE NING Arc Torch



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Now Possible Electrically

Now every electric welder can also do jobs that formerly required gas welders—and at greatly reduced costs. Instant, automatic starting of the arc. Smooth intense heat that's easy to control. There's no danger of burn-throughs on thin metals because there is no pressure from the carbon arc flame and even thin aluminum sheets can be welded without backing. For preheating, bending and hard surfacing. Can be used with either AC or DC welders. Available for ¼" or ⅜" carbons. DC Torches fitted with positive and negative carbons.

Sold Thru Your Jobber

Write for Bulletin No. 11

CESCO PRODUCTS, Inc.
Dept. M, 30 N. La Salle Street
Chicago 2, Ill.

Glidden Tour to Visit New England This Year

The 1947 Glidden Tour of antique automobiles will take place in New England, Charles A. Chayne, chief engineer of Buick Motor Division and president of the Veteran Motor Car Club of America, announced recently.

"The Glidden Tour," said Mr. Chayne in announcing the selection of New England, "was a famous pilgrimage of self-propelled vehicles run annually in the early years of this century to prove that the motor car could travel between two widely separated points without a breakdown. The tour, which was last held in New England in 1905, was abandoned in 1913 and then reinstituted last year by an enthusiastic group of antique auto fanciers.

"This year," Mr. Chayne continued, "more than 100 automobiles built before 1915 and all in excellent running order will assemble in Hartford, Conn., and drive over a 500-mile route to the White Mountains in New Hampshire and south to Newport, R. I., passing through all six New England states. Details of the trip are being arranged in cooperation with the New England Council at Boston."

The 1947 route, Mr. Chayne points out, includes some of the same roads used by the 1905 tour but will take less time due to hard roads and better tires.

Classified Advertisement

WANTED: ACCREDITED REPRESENTATIVES with established distributor accounts for exclusive territories to handle back seat radio speaker. Accessory for any auto radio. Allows all riders to hear clearly at low volume. Improved tone quality. Switch selects back seat speaker, dashboard speaker, or both speakers together. Raymond Kimball, Inc., 211 Central Bldg., Pasadena, Calif.



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PRODUCT OF THE WORLD'S LARGEST INDEPENDENT MANUFACTURER OF IGNITION PARTS

STANDARD MOTOR PRODUCTS, INC.
LONG ISLAND CITY 1, N. Y.



Bumps? Yes!



It's fun for a while—



But on terra firma, give me that gliding DELCO RIDE!

Bumping over rough water on an aquaplane is all right for those who like that sort of thing—but bumping over rough paving in an automobile is all *wrong*. Motorists don't like it, and it's bad for the car. So . . . car owners will be doubly appreciative when you show them the way to get a gentle, buoyant ride.

You can do just that, too, with Delco Shock Absorber Service—which provides you with everything you need to put a new ride into old cars. The service includes original-equipment parts and fluid, and the popular Delco Shock Absorber Exchange Plan.

Shock absorbers lose their effectiveness so gradually that car owners don't notice any difference. *Tell* them when their shocks need servicing—and both you and the owners will profit. Delco Products Division, General Motors Corporation, Dayton, Ohio.

UNITED SERVICE MOTORS

DELCO SHOCK ABSORBERS
A UNITED MOTORS LINE
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS

DELCO Hydraulic Shock Absorbers

(Advertisement)

Magnews

Newsworthy Items for Those Concerned with Industrial Cleaning and Related Problems

Volume 1 | July, 1947 | Number 1

NEW CLEANING IDEAS

For Further Details Write Magnus

Hot-Dip Tank for Cleaning Motor Blocks. There are ten sizes of Magnus Hot-Dip Tanks for cleaning engine blocks and parts with a minimum of hand brushing. A load is cleaned thoroughly in 3-5 hours. No. 32

●

Keep Your Rest Rooms and Toilets Clean and Sweet with Magnus 55-P—the solvent soap with the pleasant pine odor. Economical, easy to use without a lot of "elbow grease." Disinfects and deodorizes as it cleans. No. 33

●

Car Cleaning with Wet Water is one of the newest developments in car washing. Magnus's unique wetting agent, NXL, is a cinch to use. Just wet down the body with water, sponge on NXL and rinse with hose. No rubbing, no streaking, no filming. One gallon NXL makes a fifty gallon supply of solution. No. 34

●

Whiter, Harder, Cleaner Cement Floors are easy to get and maintain with Magnus Cement Cleaner. Just brush the solution thoroughly into the floor surface, let soak a bit, then flush away with water. Whitens and hardens as it cleans. Tackles oil and grease-soaked dirt. No. 35

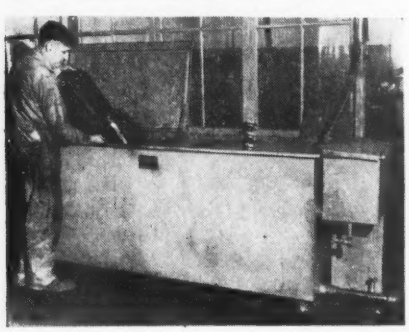
●

When Nuts or Bolts Stick Stubbornly you'll be glad you have Magnus Metaffin on hand for sludge prevention. It happens to be a mighty effective penetrating oil. Good for sticky valves, too. One pint in the carburetor will free most sticking valves in short order. No. 36

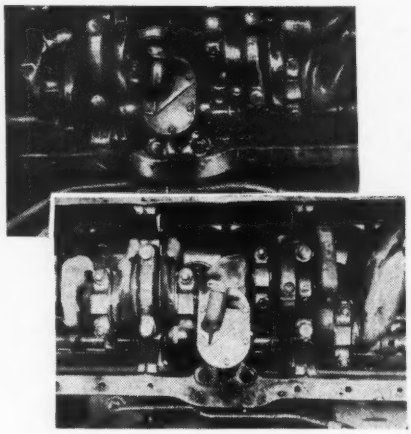
Maid of All Work for the Small Shop

That's the job of the Magnus Kol-Dip Tank. No heat. No agitation. All engine parts you want to clean are put into the first compartment, charged with Magnusol and kerosene. Leave them there till you need 'em. Then you lift them out, put into the second compartment and flush with water. They're ready to use.

Where carbon has to be removed, use the third (small) tank with Magnus 755. Soak parts ½ hour, or until you need them. Then flush clean in the middle compartment.



For an Investment of $135, Desludging with Magnus 755 Shows a Net Profit of $368!



When you desludge an engine with Magnus 755, you don't tear it down. You don't even have to drop the oil pan. All you have to do is drain the oil, replace it with Magnus 755 and idle the engine for an hour. Then drain the 755, flush and put in new lube oil. The kind of cleaning you get is shown in the two views of the same Buick engine, before and after desludging with Magnus 755. Note the sludge and engine varnish before cleaning, and the thorough job #755 does.

That profit statement? It's straightforward and easy to explain. One 55-gallon drum of Magnus 755 and the necessary kerosene and *fresh* lube oil will cost $135. You can desludge 44 cars with these supplies. Your labor cost will be about $25 for these 44 cars, or a total cost of $160. At a charge per job of $12, you'll take in $528, giving you a clear profit of $368.

These figures are based on a study of over 100 garages where Magnus 755 desludging jobs are paying these handsome returns on their investment.

Follow Up Your Desludging Jobs with Sludge Prevention!

Sell a pint of Magnus Metaffin with every oil change. In the customer's engine crankcase it will disperse all sludge-forming elements throughout the body of the oil and prevent the building up of clogging deposits. You will have sold your customer insurance against sludge damage and tucked away a worthwhile profit for yourself.

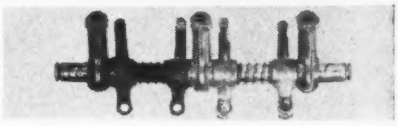
Have You Looked into Magnus Aja-Lif?

This newest cleaning machine in the Magnus Aja-Dip line deserves considerable study on your part. Operated by compressed air, it has no motor, gears, belts or similar parts requiring maintenance. Yet it gives you the same fast cleaning action and superior quality of cleaning offered by the Aja-Dip method of better cleaning by moving the work up and down IN the cleaning solution many times a minute.

Automatic loading platform that lifts out of the solution at end of cycle. Capacities up to 400 lbs. per load.

There's Nothing Like #755 for Carbon Removing, Either!

Magnus 755 has many other jobs it can do for you, among the most important of which is fast, sure removal of carbon from carburetors,



fuel pumps, rocker arms, pistons, etc. The right half of this rocker arm was cleaned in #755 in 10 minutes. No hand work!

MAGNUS CHEMICAL COMPANY
174 South Avenue, Garwood, N. J.
In Canada—Magnus Chemicals, Ltd.
4040 Rue Masson, Montreal 36, Que.



The Story of a GENUINE FORD AXLE SHAFT

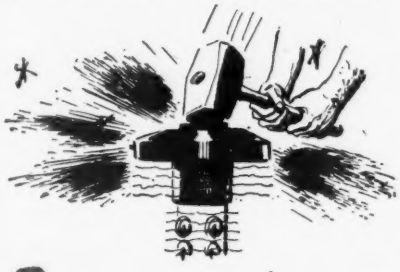
or

Why it pays to use Genuine Ford Parts

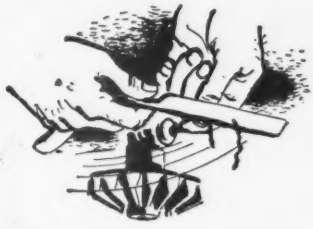


STEP right up and call me Axle Shaft—Genuine Ford, that is. I'm what makes the wheels go 'round. A tough job. But I'm tougher. More accurate, too. I'll serve you better. Here's the why and how:

1 Powerful hammers first forge me into a rough axle shaft. Automatic machines cut and trim me. Then I'm smoothed up and carefully straightened. (All along the line the Ford people take extra pains to keep me going straight.)



2 Then I'm grabbed by a 20-ton monster, operated by 22 motors, that shaves me down to fine limits. Next, I get my teeth cut—that's the end that goes in the differential. But all this is really just a warm-up for the big stuff—



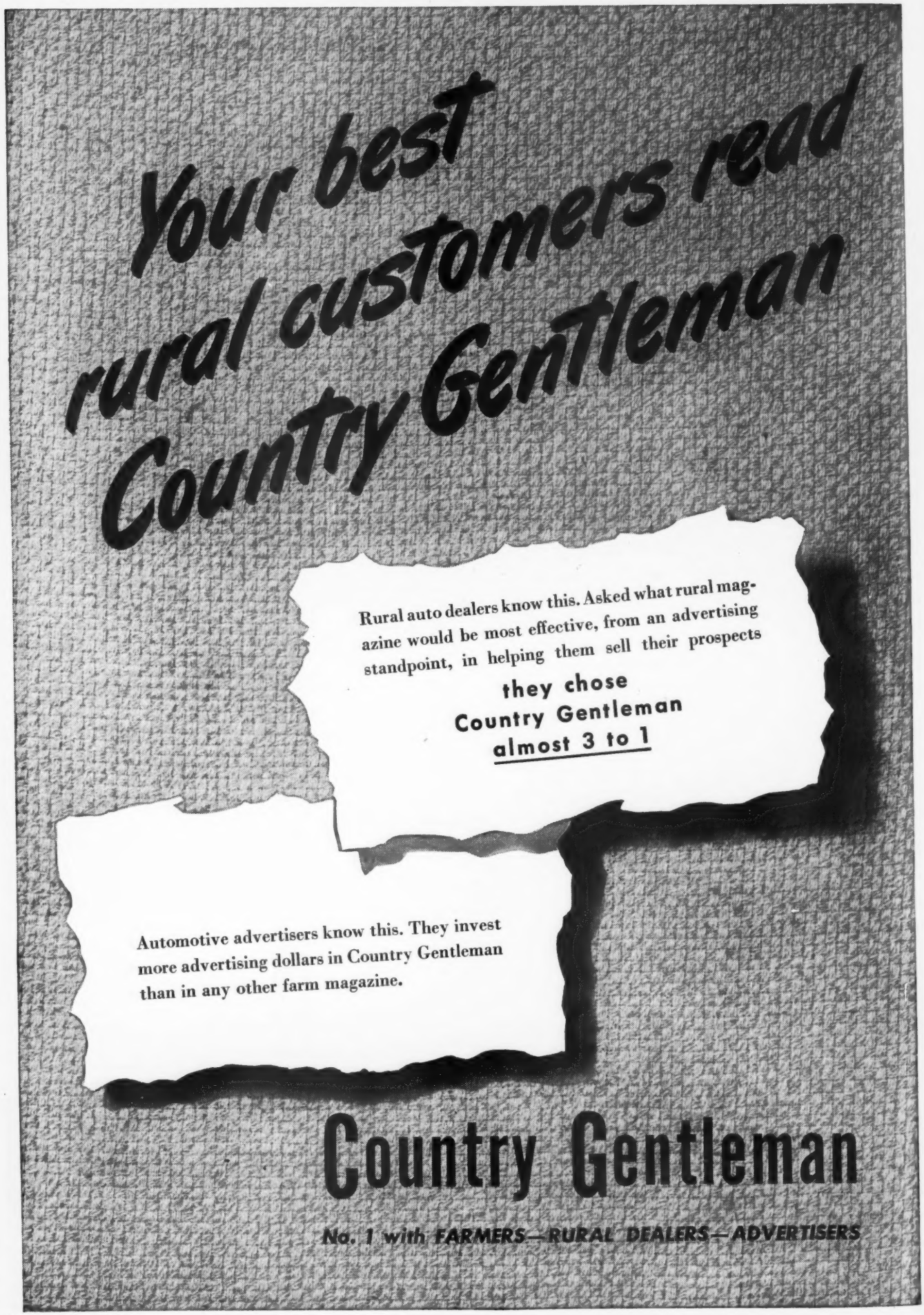
3 To do a good job, we axle shafts must be hard on the outside and softer inside. Which means skillful heat treating. First a bath, then hardening at 1480 degrees, Fahrenheit. Another bath and another furnace session, this time baking me to three different temperatures, one for each end and a third for the middle.

4 More cooling and straightening brings me to a special grinder that works over four surfaces at once. I begin to feel like myself. Time out for more checks and tests—my gear teeth must be accurate within .002 of an inch, my length within .005. That's precision plus—for true-running longer life.

GENUINE Ford PARTS

5 Comes a final wash, polish and double-check, then I'm ready to go—a Genuine Ford Axle Shaft right on hand when you need me. Look for my name—that's your assurance I'm one of the best, a Genuine Ford Part that's made right to fit right, work right and last longer.

FORD MOTOR COMPANY


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Country Gentleman
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(Advertisement)

These Features Make Valvoline A Superior Motor Oil

1. Made from finest crude
2. Selective refining process
3. Tailored additives

You know, of course, that Valvoline is made from 100% Pennsylvania crude oils. But *do* you know that Valvoline selects only the *best* Pennsylvania crudes? That's right —only the oiliest, toughest, purest crudes are used—crudes that have the highest resistance to extremes of temperature.

Selective refining retains natural advantages of crude

Valvoline is refined by selective extraction — a process that removes only the unwanted portions of the crude—retains the natural oiliness, toughness and high viscosity index. Temperatures in refining processes are not as destructive to the top-grade crude used for Valvoline as they are to crudes used for other oils—another reason why Valvoline keeps its natural qualities. In every stage of refining, these natural advantages are conserved—built into Valvoline Motor Oil.

An additive gives the finishing touch

Valvoline contains natural inhibitors (protective ingredients) which greatly reduce engine deposits such as carbon, varnish and sludge. As an added protection, the most efficient, coactive additive is blended in the oil. Valvoline is so efficient, *naturally*, that only a small quantity of additive is needed.

Naturally fine—naturally mild

Superior crude oil—superior refining — and tailored additive — all combine to make Valvoline outstandingly efficient—outstandingly mild. And mildness means better cleaning action for both new and old cars. Valvoline gives unfailing protection—in every way. Valvoline is naturally fine — Unconditionally Guaranteed!

Her Beach Dress

—by Tina Leser

The Motor Oil

for her car

—by VALVOLINE



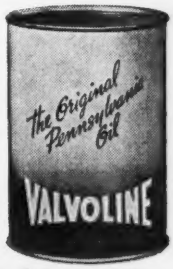
Valvoline offers you this fine motor oil of Premium Quality for improved performance and greater protection. Though produced only in limited quantity, there is always enough for the motorist who demands better than usual protection. You will find Valvoline Motor Oil at one or more better dealers in your community.

VALVOLINE

The Original Pennsylvania

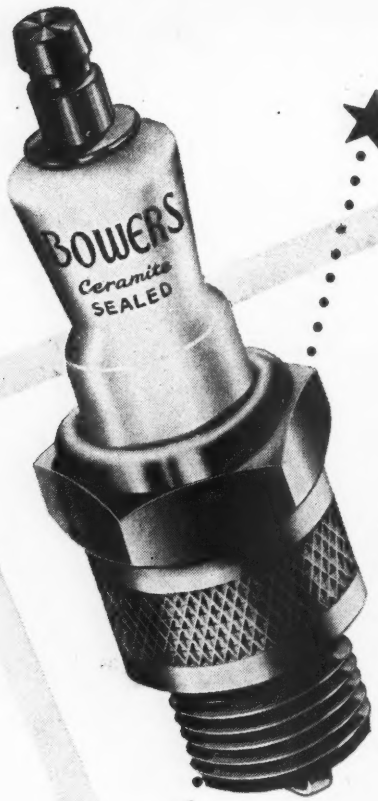
MOTOR OIL

Unconditionally Guaranteed



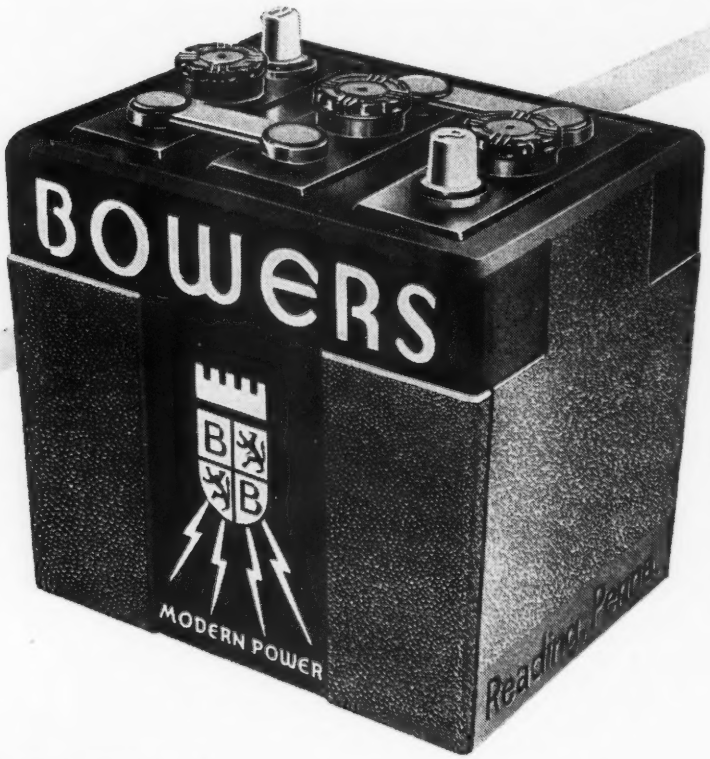
Freedom-Valvoline Oil Company, Dept. 12G, Freedom, Pennsylvania

New York, Toronto, Pittsburgh, Detroit, Atlanta, Cincinnati, Chicago, St. Louis, Los Angeles, San Francisco, Portland, Seattle, Vancouver, B.C.—Refineries at Butler; Freedom, Pennsylvania



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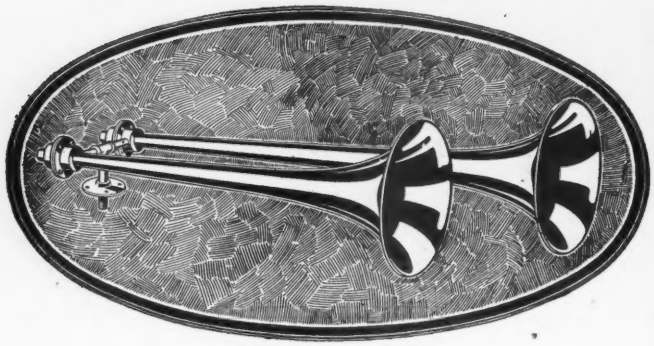
With Hypressure JENNY you can clean a car motor or chassis as "clean as a pin" in 10 to 15 minutes. The new business you'll get as a result of this super-quick service will pay for your JENNY in a few months. But that's not all. Hypressure JENNY Steam Cleaning frequently uncovers damaged and worn parts that need repair, or replacement, thus bringing you additional business and more profits. But Hypressure JENNY'S profit-making for you doesn't stop there. By steam cleaning *before* repairs you can cut repair time practically in half by saving up to 40% of your mechanics' time usually lost wiping dirt and grease from tools and machinery. And for reducing shop and garage maintenance expense, you'll find JENNY indispensable. One man using Hypressure JENNY can clean all types of shop equipment, grease racks, pits, runways, floors, walls, windows, skylights, etc., 8 to 10 times faster and better than by outmoded hand methods.

Hypressure JENNY Steam Cleaner is a sturdy, compact, portable unit easily moved from one cleaning job to another. It is safe . . . economical . . . and so easy to use that ordinary labor can operate it.

Ask your Automotive Jobber for complete information—or write direct for illustrated folder about Hypressure JENNY. There is no obligation.

HYPRESSURE JENNY DIVISION
HOMESTEAD VALVE MANUFACTURING COMPANY
P. O. BOX 95 CORAOPOLIS, PA.

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AIR HORNS



Aristocrats of

SOUND SIGNALS

Buell Air Horns are easy to sell. A pair displayed in your show room will have an almost irresistible appeal to most new car buyers. Besides the extra profits, you will have the satisfaction of knowing that you are selling a safety item that will prevent accidents and save lives.

Write for catalog sheet and complete information NOW

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2981 COTTAGE GROVE AVE., CHICAGO 16, ILL.



Single or Dual Units Available

The NIEHOFF Headlight Relay increases headlight intensity as much as 50% because it reroutes the current over a much shorter path from battery to light. It reduces resistance in the circuit to a minimum. It overcomes poor results due to bad connections or undersize wiring. And, in addition, the fuse, held in tight clips, safeguards the entire circuit.

The NIEHOFF Relay is also readily adaptable to any accessory circuit to prevent voltage drop and burning out of contact points. *Your Nieboff Jobber can supply you.*

C. E. NIEHOFF & CO. 4925 LAWRENCE AVE. CHICAGO, ILL.
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GUNK 'EM FIRST!

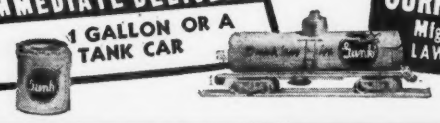
APPLICATION:

Fogless Spray of P-96 Concentrate, ten parts Solvent Distillate . . . simply rinse with water hose. GUNK removes thick insulating grease blankets from aircraft, auto or tractor engines . . . restores original thermal efficiency . . . better cooling.

1 Gallon GUNK P-96 Concentrate makes 10 Gallons.

SOLD BY BETTER JOBBERS EVERYWHERE

IMMEDIATE DELIVERY
1 GALLON OR A TANK CAR



CURRAN CORP.
Mfg. Chemists
LAWRENCE, MASS.

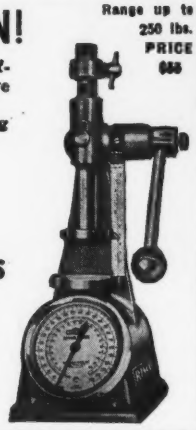
CHECK SPRING TENSION!

A **PERFECT** valve grinding job can't give efficient engine performance unless all valve springs function properly.

Insure every motor overhaul job by checking spring tension with

RIMAC
SPRING TESTER
For VALVE and CLUTCH SPRINGS

Used in production and recommended for service work by leading manufacturers of automobile, airplane, truck and tractor motors.



RINCK-McILWAINE, INC.
16 Hudson Street, New York 13

QUALITY **AMKO** AT ITS BEST!

Quality Automotive Replacements

We Have Moved to Our Own Buildings

• More Room • Better Production • Better Service • and Lower Prices on Many Items.

We are delivering the B-7090 Cross Type Universal Jt. for Ford and the No. 606779 Ring Type for Chevrolet.

AUTOMOTIVE MANUFACTURING CO., Inc.
570 W. FULTON ST. CHICAGO 6, ILL.

These 3 DELCO products add up to PROFITS

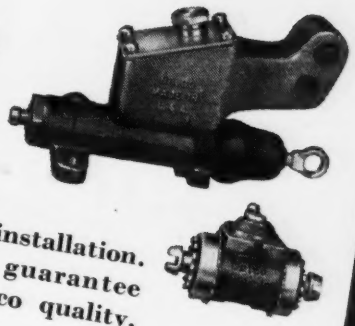


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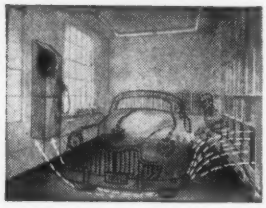
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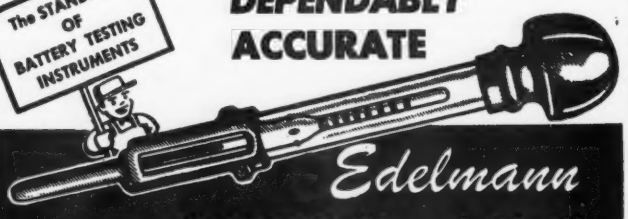


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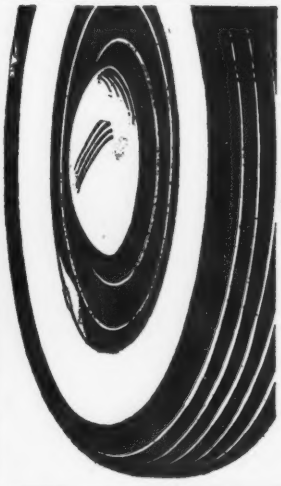
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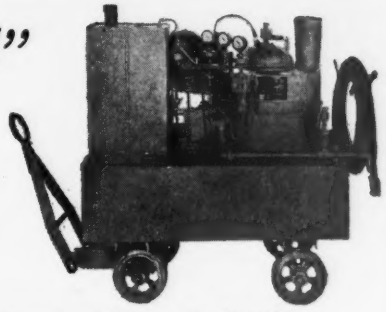
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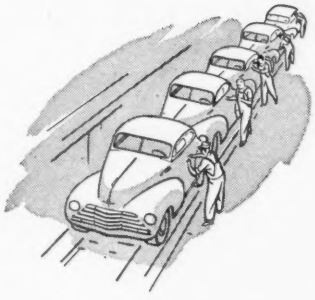
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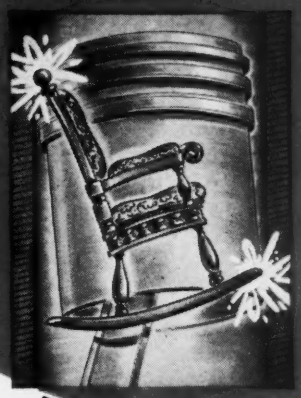


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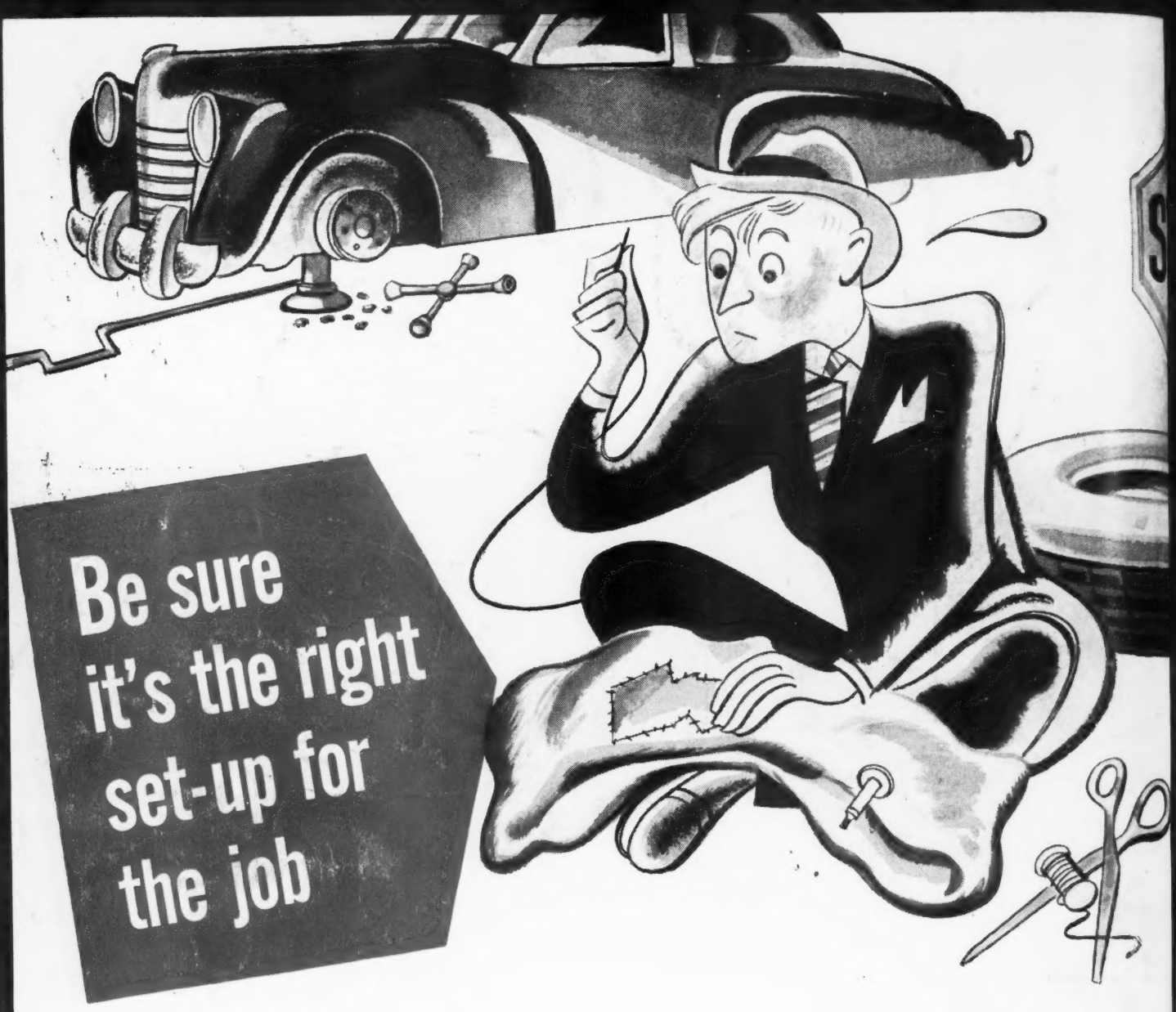
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